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Original Articles

THE SUPPRESSION OF A CHOLERA EPIDEMIC IN MANILA

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MANILA

The cholera epidemic of September, 1908, was probably a continuation of the outbreak which had its greatest intensity in January, 1908.

In January, 1908, there were 184 cases of cholera in Manila. In February, 14 cases of cholera were registered, and in March, 3 cases were registered. In April cases resembling cholera clinically began to present themselves, which bacteriologically were negative. On May 14, 1 case bacteriologically positive was reported. June 11, 1 case of true cholera was found, and suspicious cases, resembling cholera clinically but negative bacteriologically, were found on June 3, 4, 18, 19, 24 (2 cases), 27, 28 and 29. These cases resembled the true clinical picture of cholera more closely from day to day. Some were fatal in a few hours, and the intestinal contents yielded a motile vibrio which resembled the cholera vibrio but did not respond to the agglutination test. These suspicious cases, negative bacteriologically, continued in July as follows: July 4, 8, 11, 13, and 14, 1 case each.

On July 16 a case of typical cholera was found, and thereafter cases of true cholera appeared in July as follows: July 21 and 22, 1 case each; July 26, 2 cases; July 28, 4 cases; July 29, 3 cases; July 30, 4 cases; July 31, 2 cases.

In August cases of cholera, bacteriologically confirmed, were as follows:

August 1	2	August 20	1
August 2	1	August 21	1
August 3	2	August 23	3
August 5	1	August 24	4
August 6	4	August 25	2
August 7	1	August 26	3
August 8	2	August 27	6
August 9	2	August 28	1
August 10	2	August 29	2
August 13	3	August 30	5
August 17	1	August 31	5
August 19	1		

These suspicious cases bridged over a gap between the outbreak of January, 1908, and that of September, 1908. One need only see these cases at the bedside or at the autopsy to recognize the possibility that they may be cases of cholera in which the vibrio has lost some of its properties, including its agglutinability with high dilutions of anti-cholera serum.

Kolle,[1] in a series of vibrios taken from cases in Egypt, which clinically were cholera, found only a few vibrios which did not agglutinate with anticholera serum; Kolle's conclusion was that these were cases of cholera, but that, because of faulty technic, the cholera organism was not isolated. His contention is that other vibrios are sometimes found in the human intestines which, in the enriching fluid, grow more vigorously than the cholera vibrios, and one may easily fail to isolate the cholera organisms. This seems unlikely to occur in any considerable number of cases, especially if the transfer to the hard media is made direct from the stool or after a very short time of growth in the peptone solution.

1. Ztschr. f. Hyg., xliv.

From September 1 to 9 there was an average of about three cases daily. On the 10th the cases reached 7, on the 11th 9, and on the 12th 17. The course of the disease is well displayed on the chart (Fig. 2), and on the accompanying table, showing the cases from Sept. 1 to Oct. 12, 1908:

September 1	3	September 23	45
September 2	1	September 24	40
September 4	6	September 25	44
September 5	4	September 26	37
September 6	4	September 27	14
September 7	4	September 28	18
September 8	5	September 29	13
September 9	3	September 30	11
September 10	7	October 1	12
September 11	9	October 2	10
September 12	17	October 3	5
September 13	11	October 4	9
September 14	10	October 5	11
September 15	16	October 6	6
September 16	37	October 7	8
September 17	25	October 8	13
September 18	24	October 9	8
September 19	43	October 10	6
September 20	60	October 11	3
September 21	55	October 12	4
September 22	38		

The high-water mark of the epidemic was reached on September 20, when 60 cases were reported in twenty-four hours.

When the number of cases reached 9 on September 11, I recognized the probability of an epidemic and took personal charge of the operations. On September 12 the number reached 17, 12 being in Meisic district. On investigating this district I found that in 18 cholera houses, that is, houses in which cases of cholera had occurred, in every case the closet was in a filthy condition. The following combination occurred: filthy closets, rats, flies, cockroaches, and other insects, and a kitchen immediately adjoining the closet; with which all that was necessary to produce the disease was the presence of the bacillus-carrier, who, by using the closet, would furnish the infective material.

Two additional disinfecting squads were put to work immediately for the exclusive duty of disinfecting closets, and on September 13 the cases dropped to 100, and on September 14 to 10. On September 15, 16 cases occurred, and 105 additional men were employed. This force was increased as rapidly as possible without causing confusion and disorganization, and by September 22 the complete organization of 500 men was working smoothly. This force was increased by September 25 to 600 men.

ORGANIZATION

The Property Division of the Bureau of Health purchased all supplies and equipment, with a very slight increase of personnel. The Statistical Division of the Bureau of Health took care of the records and statistics. The Clerical Division handled all financial transactions and current business. The Department of Sanitation and Transportation of the City of Manila furnished ambulances, tank wagons, carretelas, carromatas, and horses.

The boundaries of the health districts already existing were left unchanged, the city being divided as follows:

Station J.—Intramuros, including Malate and Ermita.
Station L.—Paco, including Santa Ana, Pandacan, etc.
Station A.—Meisic, including Binondo, Quiapo and Santa Cruz.
Station C.—Tondo.
Station I.—Sampaloc.

The office force of each station was not increased, but the field force was enormously increased.

The organization of the field force was as follows, that of Station A, Meisic District, being given in detail by way of illustration:

STATION A.—MEISIC DISTRICT

1 medical inspector, in charge of district.
3 municipal physicians, assistants to medical officer in charge.
1 sanitary inspector, in charge of all the men.
1 sanitary inspector, for inspection of disinfecting gangs and quarantines.
12 American foremen, each in charge of a lime squad.
124 Filipino lime-throwers.
2 American foremen, each in charge of a disinfecting tank wagon and 6 men.
12 Filipinos, 6 for each disinfecting wagon.
1 chemical fire engine and crew.
1 disinfecting carretela, with crew of 5 men, disinfectants and hand pumps; for room disinfection of cholera infected houses.

TOTAL PERSONNEL OF STATION

4 medical officers.
2 sanitary inspectors.
14 foremen.
136 Filipino laborers.
5 Filipino disinfectors.

TOTAL.....161

TOTAL PERSONNEL ALL STATIONS *

	Med. Offs.	San. Insp.	Foremen.	Laborers.	Disinfctrs.	Total.
Station A, Meisic.....	4	2	14	136	5	161
Station C, Tondo.....	3	1	8	86	5	103
Station I, Sampaloc.....	2	1	6	112	5	126
Station J, Intramuros...	2	2	9	117	10	140
Station L, Paco.....	2	1	4	58	5	70
Total	13	7	41	509	30	600

Lime squads varied in size according to the district. In open districts, or sparsely settled districts, one foreman could properly supervise from fifteen to twenty-five men. In a district like Meisic, where the houses are crowded together, a foreman could not properly supervise more than twelve men.

One mechanic was assigned to the duty of keeping the disinfection wagons, pumps and hose in good condition. He traveled from wagon to wagon with tools, thus avoiding sending the wagon in for repairs, which were often trivial and could be made in a few minutes on the spot.

The amount of disinfectants used was enormous, about 150,000 pounds of lime daily, and about 700 gallons of carbolic acid or its equivalent in creolin, tricresol or formalin. There was some difficulty in securing enough disinfectants to satisfy this enormous demand. The entire stock of carbolic acid, formalin and tricresol in the Philippine Islands was used before the end of September. Four thousand gallons of Jeyes fluid (a creolin preparation) were secured from Hongkong and Japan in time to prevent the wagons lying idle. Four of the eleven tank wagons might have lost two days on account of lack of disinfectants, but the director of the Bureau of Science suggested that salt water could be electrolyzed, forming a disinfecting fluid, which, according to laboratory tests, would kill cholera bacilli promptly. His offer to electrolyze the solution was accepted, and for two days four of the wagons used this fluid. In a short time all the lime in Manila and vicinity was used and the entire daily output of the kilns in the Island of Luzon was taken. The lack of lime sometimes caused the cessation of lime disinfection at 3 or 4 o'clock in the afternoon, but lime squads were equipped with shovels, hoes, rakes, brooms or other cleaning instruments, and their spare time was utilized in digging ditches and cleaning up the yards of premises.

Infected districts were subdivided into subdistricts; maps were made of these subdistricts, and the foreman in charge of a disinfecting wagon or lime squad was furnished with a map of his subdistrict.

The ordinary chemical fire engine makes an excellent disinfecting apparatus. The eighty-gallon tanks are charged with carbon dioxid produced from bicarbonate of soda and sulphuric acid; to make an efficient disinfecting solution it is only necessary to add carbolic acid, creolin or other disinfectant to this solution. The ordinary street-sprinkling wagon is convertible into an excellent apparatus. All that is necessary is to install an ordinary pressure pump and several hundred feet of hose, put in the disinfectant, and fill the tank from the street hydrant. We used eleven of these wagons and four chemical engines, and they were all effective. The tank wagon possessed the advantage of being cheaper, as the cost of soda and sulphuric acid for charging the chemical engine is not inconsiderable. In Manila the cost was offset by the fact that we received the services of the chemical engine crew free of charge.

Several kinds of disinfectants were used in the tank wagons. Crystal carbolic acid does not mix readily and requires careful handling when used on a large scale. Formalin is good but causes a great deal of complaint from the people because of its irritating properties. Crude carbolic acid, in our experience, did not mix well, and from both kinds of carbolic acid, because of irregular distribution in the solution, minor accidents occurred, as burning of the hands and feet of the laborers, and killing of dogs and chickens. The most satisfactory disinfectant was Jeyes fluid. It is nearly fireproof and is very effective. It mixes perfectly with water, forming a milky solution of uniform strength. It does not burn the hands or feet of the laborers or children about the house, and no ill effects on animals or chickens were noticed.

The simplest and most effective way to use lime is with a bucket and a ladle. The lime gang of from fifteen to twenty-five men was handled by one white fore-

* This does not include police for house-to-house inspection, nor some 300 men of the city street cleaning force, who have been assisting in draining the worst places in the barrios, nor the constabulary for quarantine guards.

man and one native *capatas*. Each gang was followed by a cart with lime. Each native lime-thrower carried a bucket and scoop or ladle. After a little patient instruction, the natives learned to use the lime to the best advantage, to place it where it was needed, and to avoid the spots where it was unnecessary. Their instructions were definite and included liming all closets and places where fecal matter existed or was likely to be deposited.

Each chemical engine was handled by its own crew in charge of a lieutenant of the fire department.

Each tank wagon was in charge of an American foreman, who directed the disinfection, was responsible for the thoroughness of the work and for the conduct of the six natives who manned the pump and hose.

struction was encountered; the man in question refused to permit the disinfectors to enter; he was arrested, fined 50 pesos, and no further trouble occurred.

The organization was mobile, and concentration of disinfecting wagons from Paco, Intramuros and Sampaloc, as a reinforcement of Meisic and Tondo, was effected when necessary, with good results.

The general plan of campaign was as follows:

House-to-house inspection by police to discover promptly cases of cholera.

Constabulary guard on house and inmates to prevent ingress and egress until removal of the patient and disinfection of the house.

Examination of the stools of cholera contacts to find

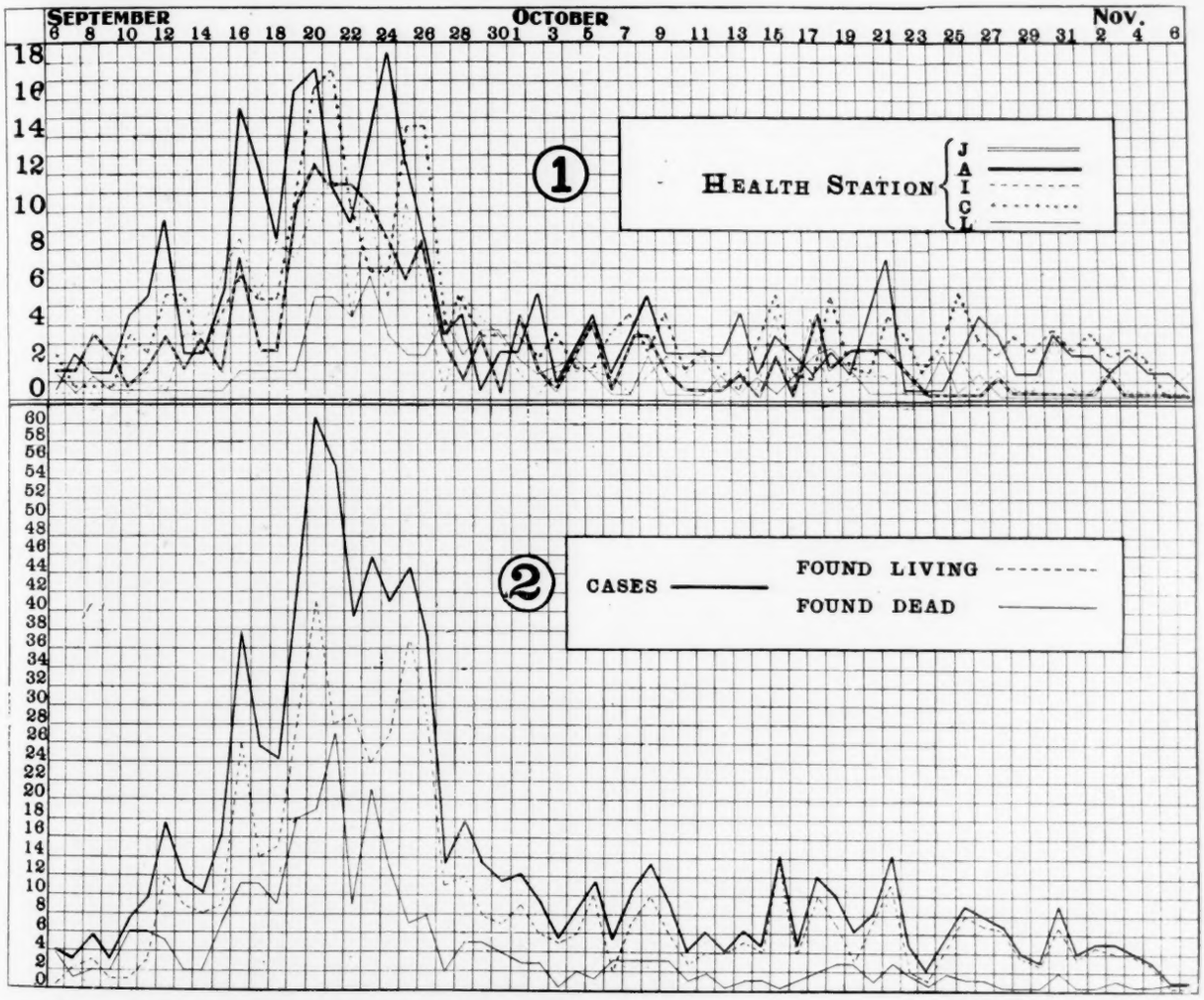

Fig. 1.—Chart showing the prevalence of cholera in Manila from Sept. 6 to Nov. 6, 1908. The spread of infection by districts: Station J, Intramuros, including Malate and Ermita; Station A, Meisic, including Binondo, Quiapo and Santa Cruz; Station I, Sampaloc; Station C, Tondo; Station L, Paco, including Santa Ana, Pandacan, etc.
Fig. 2.—Chart showing the number of cases found daily.

In giving foremen their instructions great stress was laid on the necessity of displaying courtesy at all times. They were instructed to take part in no argument with householders or others, and to do their work with consideration for the feelings of the people, but none the less thoroughly. If actual obstructions were encountered they were to notify the central office at once. The result of these instructions was that during the whole campaign the valid complaints were less than a dozen. All complaints were promptly investigated by the acting director of health, and if found valid the foreman in charge was dismissed. Only one case of actual obbacillus-carriers, the bacillus-carriers being sent to San Lazaro Hospital for treatment.

Daily disinfection of all insanitary closets with lime, and disinfection of ground surfaces known to be, or suspected of being, soiled with fecal matter.

An attempt was made to disinfect daily all closets in the strong material districts which were not flush closets or which were not kept clean. In the light material districts the effort to disinfect the dejections of the entire population necessitated the disinfection of entire districts. It was necessary to disinfect practically the whole ground area. When one considers the

enormous area to be covered daily in Tondo, Sampaloc, Malate and Paco, with their outlying barrios, and the fact that there are over 5,000 insanitary closets in the Meisic district alone, the magnitude of this work may be imagined.

Two general methods of disinfecting were employed: (1) the spreading of lime; (2) disinfection with water wagons, hose and pump, or by chemical engines containing carbolic acid, creolin, formalin or other disinfecting material.

Lime was effective in conjunction with drainage in the low-lying, swampy nipa districts, and also for disinfecting the bad closets in the strong material districts. The tank wagons and chemical engines were used for general disinfection of lower floors, outhouses, patios, stables and closets in both strong and light material districts.

My experience in the recent epidemic points to the fact that the most important rôle in the transmission of cholera is played by the bacillus-carrier.

If a bacillus-carrier be a person of cleanly habits, and if he can and does make use of proper closet facilities, he is practically harmless. But, on the other hand, a bacillus-carrier of filthy habits, who has no closet facilities, or refuses to avail himself of the public closets furnished him, is the greatest menace to the public health which can possibly exist, so far as cholera is concerned. The demonstration of the fact that over 7 per cent. of apparently healthy individuals in the Meisic and Tondo districts were bacillus-carriers, coupled with the insanitary closets of Meisic district and the absence or failure to use public closets in the nipa districts, will go far toward explaining the dissemination of cholera in Manila this year.

Fig. 3.—Chemical fire engine converted into disinfecting apparatus.

Every effort was made to discover promptly light cases of the disease and bacillus-carriers. When a case of cholera was found the house was quarantined until the removal of the patient and the completion of the disinfection. The stools of the other inmates were taken for the purpose of discovering bacillus-carriers. These, if found, were sent to the San Lazaro Hospital and there detained until the vibrios disappeared from their stools. A house-to-house inspection was made of a large area, having the infected house for a center. This was done daily for five days.

The following tables show the number of apparently healthy persons examined for cholera bacilli and the number who were really carrying the bacilli:

BILIBID PRISON

Number of persons examined	264
Number found positive	17
Percentage found positive	6.44

CITY OF MANILA
(Exclusive of all hospitals and Bilibid Prison)

Number of persons examined	376
Number found positive	27
Number found negative but containing vibrios other than cholera	46
Percentage found positive	7.18
Percentage found negative but containing other vibrios than cholera	12.23

Even with perfect daily disinfection of closets and places soiled with fecal matter, all chance of infection from bacillus-carriers is not cut off, because a bacillus-carrier with soiled fingers may infect the food or drink of other persons.

The prohibition of certain native foods, fruits and vegetables was necessary, not only because these substances were often infected or dangerous of themselves,

Fig. 4.—Street-sprinkler converted into a disinfecting wagon.

but they were also the substances carelessly handled by dirty people of dirty habits, many of whom were undoubtedly bacillus-carriers, and they were the substances which were eaten without sterilization by boiling or cooking after such handling.

It has been demonstrated this year that the perennial outbreaks of cholera in Bilibid Prison are probably due to bacillus-carriers. On the appearance of cholera in Bilibid Prison this year I gave orders that stools be examined for cholera of those who had anything to do with the preparation or handling of food or drink. Out of twenty-six apparently healthy persons, seventeen were carrying cholera organisms in their intestines. To find out and isolate all the other bacillus-carriers would have involved an amount of work in stool examinations alone which would have been impossible for the already overtaxed bacteriologists.

Results were obtained by an order which I issued to compel washing of the hands in disinfecting solution after stool and before eating. This order was enforced and cases ceased to appear, although there were doubt-

less many bacillus-carriers among the 3,000 prisoners whose stools had not been examined.

The practice of taking stools had to be discontinued when the cases increased to such an extent that it was no longer possible to do it. For the same reason the house-to-house inspection of infected areas had to be supplanted by a general house-to-house inspection of the whole city when the number of infected houses, that is, houses in which cholera had appeared within five days, reached 200.

Failure to find cases of cholera early makes the suppression of the disease difficult. Patients, even with the house-to-house inspection, are from two to twenty-four hours sick before discovery. On discovery a quarantine guard is placed on the house and inmates, and from this point that particular focus is adequately cared for, but in the hours before discovery other individuals probably have been infected.

When a Filipino falls ill all the neighbors, either through interest or curiosity, will crowd into the house. On discovery of the case, or decision of the householder or doctor to report it, these people promptly scatter, go to their meals without washing their infected hands, eat their rice with these same infected hands, and even

Fig. 5.—Small water wagon converted into disinfecting wagon.

carry with them from the infected house mats, articles of clothing, food and drink to save them from the all-destroying disinfectors. Our disinfectors try to trace out these other houses to which clothing, etc, has been carried, but it is very difficult and often impossible.

To illustrate the spread of the infection in this way, the course of the disease in the Meisic District, Station A, may be taken as an example. It will be observed (Fig. 1) that every four days there is a sudden increase in the number of cases. These are the persons infected from the cases of four days previous. It does not mean an incubation of four days, for these patients when found have already been sick for some time, but it would indicate an incubation of from two to three days.

Considering a house where cholera has been found within five days as a focus, on September 23 there were 241 infected foci in the city of Manila, well scattered, as is shown by the following table:

Meisic	66
Tondo	59
Sampaloc	41
Intramuros	54
Paco	21
Total	241

With the organization and the employment of the measures outlined above, in twelve days the number of cases was reduced from 60, the maximum number in one day (September 20), to 5 cases on October 3. A few cases occurred daily throughout October, and these cases, in nearly every instance, came from well-known cholera areas, districts in which cholera persists after its eradication from the more cleanly and sanitary portions of the city.

For example, of the last 75 cases in October, one-third occurred in the district bounded by Calles Bilibid and Paz on the south, Calle Magdalena and San Lazaro on the west, the railroad on the north, and Calle Felix Huertas on the east. This district has no surface drainage, the interiors were lower than the street gutters of Calle Cervantes and the majority of the houses, during the greater part of the year, stand over collections of filthy water, slime and muck. This office demonstrated to the city authorities the feasibility of draining this area by ditches and the drainage work is now in progress.

Nine per cent. occurred in a triangle formed by Calle Ascarraga on one side, Tondo Beach on the second side,

Fig. 6.—Lime-throwing squad.

and Calle Ylaya and Calle Quesada on the third side, one of the best examples of the illegal perpetuation of the nipa shack in the strong material district. Less than 10 per cent. were found in the strong material district, and most of these could be traced to one of the above-mentioned plague spots.

Cholera is the same disease, whether encountered in Germany, Russia, Italy, Egypt, India or the Philippines, but the measures taken to prevent its spread and to suppress the infection depends on the geographical location of the epidemic. To suppress a cholera epidemic in a country like Germany, for example, it is a comparatively simple proposition, while in the Philippines its suppression is complicated by existing conditions peculiar to these islands.

Four things are of prime importance for the suppression of cholera: (1) a good water supply for all the people; (2) safe disposal of the defecations of the entire population; (3) prompt discovery of cholera cases, suspects or bacillus-carriers, with immediate isolation and disinfection; and (4) habits of cleanliness.

If the water supply is free from cholera and can be kept so, then the spread of the epidemic depends on the

improperly cared-for stools of the persons carrying the bacilli of cholera. Flies, cockroaches and other insects or animals having access to such stools carry the infection to food or drink. There is infection from persons who do not wash their hands and whose soiled fingers carry the infection to food or drink. There is also direct infection from actual cases of cholera.

WATER

Manila city water has been examined daily by the Bureau of Science and the cholera bacilli have not been found therein. However, with the appearance of cholera in San Mateo and Mariquina, it was deemed prudent to place a military guard to prevent possible pollution of the river.

The new water supply, taken from higher up the gorge, will be practically safe from contamination by human excrement.

The great trouble with the Manila water supply is that it does not reach all the people. Some barrios are at a great distance from the nearest hydrants, and the inhabitants must carry or pay for carrying water a long distance. As a result they use the water from shallow wells, ponds, esteros or other questionable sources for washing clothes, kitchen utensils, and also in many instances for drinking purposes.

Fig. 7.—Drainage of a cholera area under the direction of the Bureau of Health.

It was deemed necessary to close all wells, except a few in the more distant barrios, which were treated with permanganate of potash. In addition, wherever possible all stagnant places were drained by digging ditches, and certain small, infected esteros were patrolled by the constabulary to prevent the people using the water.

DISPOSAL OF HUMAN EXCREMENT

The new sewer system is another sanitary improvement anxiously awaited. The existence in Meisic districts of thousands of tight vaults and filthy closets is responsible in a great measure for the spread of cholera in that district and the difficulty experienced in eradicating the disease. These filthy closets and tight vaults can be replaced by modern flush closets connected with the new sewer system. In the newer residence districts septic vaults and absorbing basins are used as receivers of sewage from modern flush closets. It will be an improvement when all vaults, however satisfactory, in construction, are no longer necessary, because of the installation of the new system.

In the nipa districts the people depend on the sparsely scattered closets or have no closet facilities whatever. In the latter instance the fecal matter is deposited in the most convenient place: in the long grass, in the estero, in pools or gutters, or under the house. The family pig takes care of a considerable quantity of human excreta and garbage.

There are large barrios within the limits of the city of Manila where the only way of entrance is a path too narrow to permit a wagon to enter. In these, of course, there is no collection of garbage nor are there any closet facilities.

Habits of cleanliness are best secured by a campaign of popular education. Excluding the water supply and the disposal of feces, the other factors in spreading infection can be nullified by the inculcation of cleanly habits. If the bacillus-carrier washed his hands often enough and at the proper times he would not transfer infection from his dirty fingers to the food or drink of others. If the kindly native neighbors who assist these sick with cholera, and who disappear before the arrival of the health officers, can be taught the necessity of washing their hands before eating or handling food, many more cases will be prevented.

Fig. 8.—Drainage of a cholera area under the direction of the Bureau of Health.

The Bureau of Health has printed cholera circulars in Spanish, English and all the native dialects, telling how to protect one's self and others against the infection of cholera. This campaign is best conducted in the schoolroom and from the pulpit. The Bureau of Education and the Roman Catholic Church have cooperated in an attempt to spread the knowledge and advice contained in the cholera circulars among the people. Efforts along this line have met with success, but it requires a long time to change the habits of a people entirely, and it will probably require another generation to complete the work.

In my report to the Secretary of the Interior I have made the following recommendations, calculated to prevent the recurrence of cholera in epidemic form in Manila. The difficulties which attend the carrying out of these projects are recognized as well-nigh insuperable, but the ideals are not impossible, and an attempt to realize them should be the policy of the bureau.

The Manila city water supply must be extended to every part of the city and placed within easy reach of every one.

Tanks and reservoirs must be so constructed as to preclude the possibility of contamination.

Esteros must be controlled and confined to definite beds either by adequate walls or by dredging so that any overflow land will be drained between tides.

It is essential to fill in low places which can not be drained to the proper height above the curb.

Public closets must be established in all barrios, so that every inhabitant of the city of Manila will have closet facilities at his disposal. It is advisable to have more closets even if of less seating capacity; six closets of six pails each will be of more value than three of twelve pails each, for the reason that the native has a shorter distance to travel; also the cutting of alleys through the back yards will facilitate his journey to the closet.

Before permitting land to be used for building purposes within the city limits the land should be subdi-

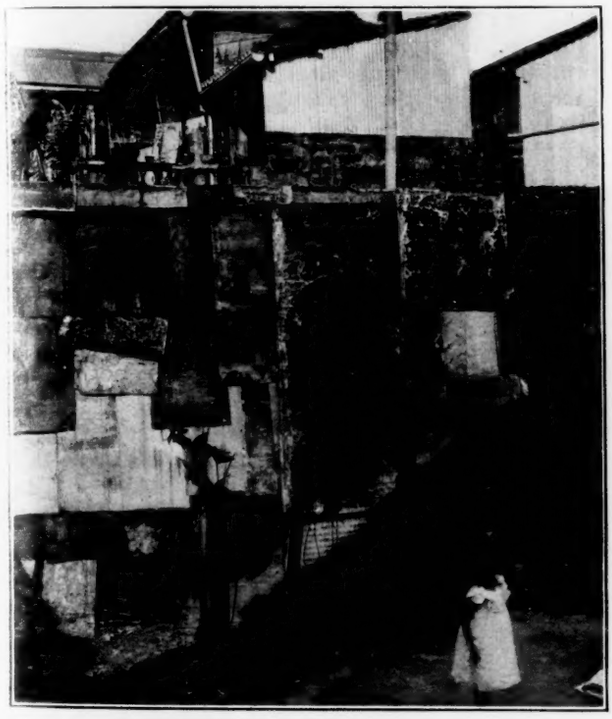

Fig. 9.—Sample of construction permitted by the municipal board in the strong material district of Manila.

vided by streets and alleys on a definite plan. The indiscriminate building of nipa shacks on the interior of a block without order or regard for necessary intervening spaces should not be permitted. Streets and alleys should be cut through already existing collections of nipa shacks and when necessary houses removed to permit proper spacing. Streets must be opened into barrios within the city limits which are now isolated and have no wagon road entering them to permit the collection of garbage and refuse.

There should be a sufficient force of sanitary police to enforce the use and sanitary maintenance of closets.

All wells must be filled in.

More stringent measures should be used to compel the prompt reporting of suspicious cases, with severe penalties for infractions of this ordinance.

Stricter enforcement of the building code is necessary in the erection of new buildings.

Nipa shacks in the strong material districts must go, and repair to old nipa shacks, which perpetuate this problem, must be prevented. These nipa districts exist by sufferance within the strong material districts, dilapidated shacks crowded together in the most insanitary manner, where there are excellent public closets, patronized only by a select few. The majority still find it easier to deposit or throw their dejecta on the swampy ground. These districts are the natural homes of cholera, and from there the people who are trying to live decently are infected by means of cooks, coachmen or other servants, who spend their spare time in these plague spots.

A proper system of surface drainage is requisite for every part of the city of Manila, where such drainage is lacking, but especially (1) the San Lazaro Estate and that portion of the city from the San Lazaro Estate to the railroad crossing on both sides of Calle Cervantes; (2) Santa Monica; (3) Antonio Riveria; (4) Palomar and Magdalena interior; (5) that portion of Tondo north of Moriones and west of Estero de la Reina; (5) Malate district, bounded by Herran, Wright, San Andres and Nueva.

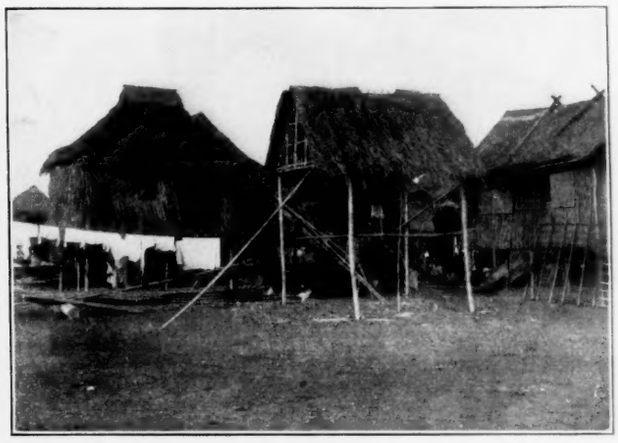

Fig. 10.—New light material construction permitted by the municipal board in strong material districts.

SYPHILIS OF THE STOMACH *

ARTHUR CURTIS, M.D.
CHICAGO

Syphilis of the stomach is of considerable pathologic interest because it is rarely diagnosed. Although the affection is infrequent, the value of recognizing its presence is enhanced for clinicians by the fact that serious complications, amenable to treatment, have arisen in two out of sixteen cases thus far reported. One is the case of Fraenkel,[1] in which extensive syphilitic ulceration resulted in general peritonitis and death; the other is a perforated syphilitic ulcer of the stomach reported by Flexner.[2]

Undoubted instances of stomach syphilis have been described by the following: Chiari[3] (2 cases), Klebs[4]

* From the Pathologic Institute of the Berlin City Hospital (Krankenhaus Friedrichshain); director, Dr. Pick.

1. Fraenkel, Eugen: Virchow's Arch. f. Path. u. Path. Anat., 1899, clv; Münchener med. Wchnschr., 1901.
2. Flexner: Gastric Syphilis with Report of Case of Perforating Ulcer of Stomach, Am. Jour. Med. Sci., October, 1898.
3. Chiari: Magensyphilis Festchr. F. R. Virchow, 1891, ii, 297.
4. Klebs: Handbuch der Pathologischen Anatomie, 1869, i, 269.

(1 case), Cornil and Ranvier[5] (1 case), Fraenkel[1] (1 case), Stolper[6] (1 case), Flexner[2] (1 case), Weichselbaum[7] (1 case), Birch-Hirschfeld[8] (4 cases), Buday[9] (1 case), Bittner (3 cases).

A summary of literature with synopsis of cases to date shows four important factors which play a part in the anatomic diagnosis.

1. Location of changes. — The seat of primary involvement is, as a rule, the submucosa, the gummatous tissue invading other coats secondarily.

2. Miliary gummata, sometimes with giant cells of the Langhans type.

3. *Spirochætæ pallidæ.* — These are not to be depended on, according to the views of both Koch and of Schmorl.[10] They are often not present in undoubted syphilis; on the other hand, Koch, using the Levaditi stain, found, in cases of undoubted carcinomata of the lung, organisms of the typical appearance of *Spirochæta pallida.*

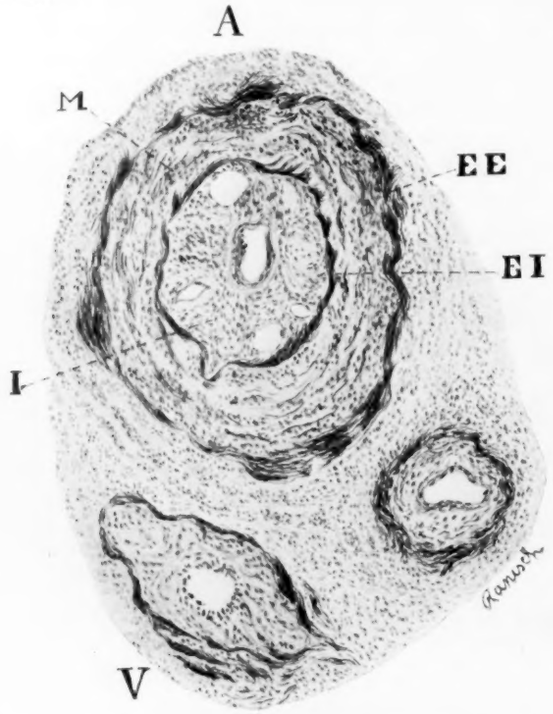

Fig. 1.—A group of three thickened blood vessels (orcein stain); A, artery; I, intima with high-grade subendothelial proliferation and cellular infiltration; in the center of the small lumen of the vessel; EI, elastica interna; M, thickened media; EE, elastica externa; V, vein correspondingly altered.

4. Peculiar vascular changes of high grade, resulting in partial occlusion or obliteration of vessels. —Cellular accumulations are found about the vessels. The latter may become thickened from cell increase, thus beginning from without, or subendothelial change may be the prominent feature. The process tends to spare many vessels entirely, while others are thickened to the point of occlusion.

Chiari,[3] with careful examination of 243 cases of syphilis, extending over a period of seven years, found only two gastric cases. The first was that of a three weeks' child with multiple syphilitic involvement. In the stomach were several flat, gummatous elevations, the majority being superficially ulcerated. Microscopically the submucosa consisted of round, oval and spindle-celled new tissue. Round cells were beautifully arranged about the vessels and invaded their walls to a limited extent. The second case was that of a man with stomach ulcer, showing an infiltrated ulcer wall and a surrounding gummatous area, chiefly situated in the submucosa. The microscopic findings were as in the previous case, except for more marked vascular changes.

Fraenkel[1] thoroughly demonstrated the almost pathognomonic changes in the blood vessels. In a case with gumma of the spleen and thirty-one syphilitic ulcers of the intestine, he found thirteen ulcerating gummata of the stomach. Encircling the veins were round, oval and spindle cells, which penetrated the vessel walls, causing a thickening of the coats with partial or complete obliteration of the lumina. In some veins existed a localized, narrowing endophlebitis, not infrequently associated with the just-mentioned cellular infiltration from without. The arterial walls were penetrated by similar granulation tissue, the degree of alteration being a lesser one. Fraenkel found similar changes in a case of intestinal syphilis.

Other authors emphasize the localization of changes in the submucosa; Stolper[6] describes a submucosa infiltration, microscopically showing large connective tissue cells, most numerous about the vessels, in which they cause frequent obliteration.

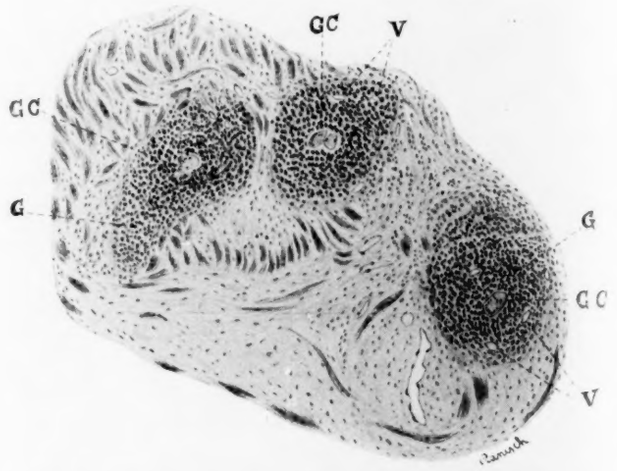

Fig. 2.—Miliary gummata imbedded in fibrous and muscle tissue; G, gumma, composed of epithelioid cells; GC, giant cells of Langhans type; V, blood vessels, found plentifully in each nodule.

Patient.—The case under present consideration is that of a woman, aged 30, who was on the surgical service, in Pavilion IX, Krankenhaus Friedrichshain, Berlin. Points of interest in the history, obtained through the kindness of the chief surgeon, Oberarzt Dr. Braun, are as follows:

History.—The patient at the time of entrance had been married twelve years and had had four apparently healthy children and one abortion. After the birth of her third child, while the patient was confined in the Charité Hospital with postpartum parametritis, a brownish-red, spot-like eruption was present on the chest. Further suggestive of possible syphilis is the fact that the patient once had complete paralysis of the right arm and leg, the trouble gradually passing away in two weeks. (At the time of obtaining the history the examining physician noted a drooping of the right side of the face and decreased power in the right hand.) Stomach trouble began one and a half years before entrance into the hospital,

5. Cornil and Ranvier: Manuel d'histologie pathologique, 1884, ii, 269.
6. Stolper: Beitrag zur Syphilis visceralis, Biblioth. med., 1896, C., No. 6.
7. Weichselbaum: Ber. d. Rudolfspitales in Wien, 1883, p. 383.
8. Birch-Hirschfeld: Lehrbuch der pathologischen Anatomie, ii.
9. Buday: Virchow's Arch. f. Path. u. Path. Anat., cxii, 517.
10. Schmorl: Verhandl. d. deutsch Gesellsch., ii.

with pains after meals, at times associated with vomiting. Fourteen days before entrance one-half cup of blood was vomited.

Examination.—Physical examination showed above the navel a moderately tender, apple-sized, slightly movable tumor, distinctly separable from the liver. Dilatation of the stomach showed that the mass lay on the greater curvature. An examination of stomach contents revealed combined acid decreased, free hydrochloric acid absent, lactic acid present in small amount. A diagnosis of carcinoma was made, and operation was decided on.

Operation.—In the stomach, anteriorly, not far from the pylorus, and posteriorly near the head of the pancreas, were tough, flat, tumor-like thickenings of the wall. A gastrectomy was performed, the resected portion extending from the middle of the stomach almost to the pylorus. The excised tissue was taken to the pathologic institute, where Dr. Pick made a macroscopic diagnosis of gummata of the stomach, with beginning ulceration.

Postoperative History.—Following the operation the patient went on to uneventful recovery. Tuberculin skin and conjunctival tests, which were made during convalescence because of the unusual appearance of the excised tissue, failed to give the tuberculin reaction. Wassermann's test was unsatisfactory.

Pathologic Specimen.—The resected stomach, preserved in

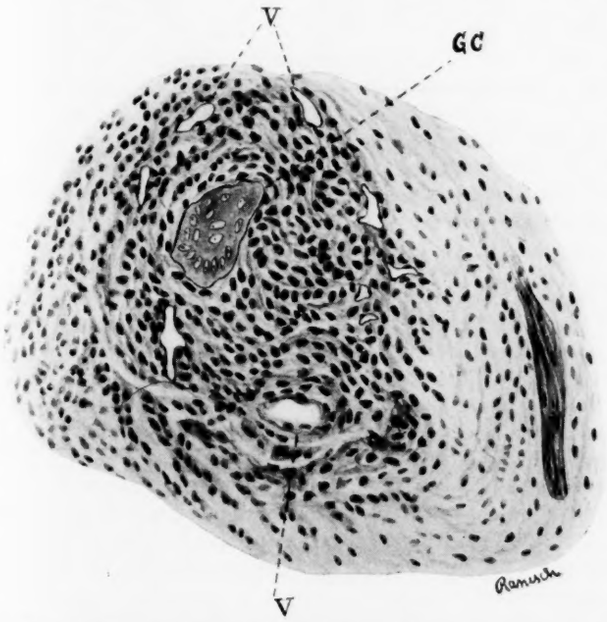

Fig. 3.—Young gumma, under high magnification, showing cell structure; V, numerous blood vessels in a stroma of epithelioid cells; there is absence of spindle cells, indicating that the process is not far advanced; GC, giant cell, with pale peripheral nuclei.

natural condition in Pick's solution, presented a wall which was everywhere somewhat thickened. The mucosa was mammillated, with gastric areas clearly defined and unusually prominent. On the mucous surface of the opened stomach two flat longitudinal elevations were seen. One elevation was 7 cm. in length, with average width of 2.5 cm. It was covered with an ulceration which extended through the mucosa, here and there involving the submucosa. The slightly elevated wall of the ulcer was composed of a series of confluent crescents, and was sharply defined, with vertical margin except for 1 cm. of its length along the upper border, where it was undermined. The base had a thin grayish coat, the removal of which laid bare the mottled, fatty-looking submucosa. Except at the margins the ulcer floor was elevated to the level of the uninvolved mucous membrane of the stomach. The second elevation lay parallel with and beneath the first. It rose gradually from the surrounding gastric mucosa, forming a smooth, yellowish-brown, plateau-like elevation, 6 cm. in length and 2 cm. in width, the end nearer the pylorus being capped with a small irregular ulceration. There were no tubercles associated with the ulcers, nor were they to be found on the corresponding serosa. The involved tissues, including the ulcer floor as well as the non-ulcerated elevations, had an elastic, rubber-like consistence. Incision through the thicker portions showed that the increased thickness of the stomach wall was due mostly to changes in the submucosa.

Microscopic Examination.—Specimens were stained with the following: Weigert's elastic tissue stain, hemalum and eosin, orcein, carbol fuchsin, silver nitrate and pyrogallic acid. The submucosa consisted of coarsely meshed cells, with clearly staining nuclei. It was very richly vascular and in association with the blood supply characteristic changes were manifest. There were extensive accumulations of round, oval and spindle cells, most numerous in the vicinity of blood vessels, around which they formed concentric rings, and, invading the vascular coats, greatly increased their thickness. In many veins, and in a lesser number of arteries, the lumen was entirely occluded, an orcein stain being necessary to establish the identity of the vessel. (Fig. 1.) A limited number of vessels on cross-section were free from areolæ of cells, while in the case of those longitudinally cut a part of the course might be entirely free, with the remainder surrounded by a rich cellular envelope. A subendothelial proliferation occurred in some vessels; it involved as a rule only a portion of the circumference and took place independent of cellular encroachment from without. The richness of cell infiltration prohibited the determination of subendothelial proliferation in many blood vessels. The submucosa and that portion of the muscular coat adjacent to it contained several accumulations of epithelioid cells bearing characteristics of gummata. (Fig. 2.) They showed no tendency to necrosis, small blood vessels being numerous and distributed throughout. Giant cells with peripheral position of the nuclei (Langhans type of giant cells) were found in association, and in a few instances existed also entirely independently. Among the foreign elements were numerous eosinophiles and also a goodly number of polynuclear leucocytes. The lymph vessels were distended with round cells; lymph follicles were numerous, each supplied with easily distinguishable large capillaries. In the mucosa and muscular layers, except for the persistence of a moderate perivasculitis, and the noteworthy accumulations of epithelioid cells found near the submucosa, no changes were manifest. Stains for the *Spirochæta pallida* by Levaditi's method gave negative results. Careful search for tubercle bacilli was likewise negative.

Differential Diagnosis.—The possibilities which came into consideration were (1) simple gastric ulcer, (2) tuberculous ulcer, and (3) syphilis.

Simple gastric ulcer did not account for plate-like, noncicatricial thickening of the stomach wall, or extensive perivascular proliferation with high-grade vascular occlusion. It would, moreover, be unusual for the base of an extensive simple ulcer to be elevated to the same plane as the surrounding gastric mucosa.

Tuberculosis, although extremely rare in the stomach, was more difficult to exclude. The presence of Langhans giant cells narrowed down the diagnosis to either tuberculosis or syphilis, but did not distinguish between them. In diagnosis of the above mentioned probably gummatous accumulations of epithelioid cells, three factors opposed tuberculosis. First, there was no caseation, such as would be somewhere expected among such a relatively large number of tubercles. Second, there was no sharp demarcation from the surrounding tissues. Third, there was present in each such nodule a liberal number of small blood vessels. Such a finding as this last, in the opinion of Baumgarten, is decisive evidence that we are dealing not with tubercle, but with gumma. (Figs. 2 and 3.) Such a marked infiltration of the stomach, and the accompanying ulcer having regular and vertical walls, are not suggestive of tuberculosis. Other negative findings were the absence of reaction with skin and conjunctival tuberculin tests, lack of tubercles on the serosa, and absence of tubercle bacilli.

Syphilis accounted most logically for the gross appearance of the specimen. It was a non-malignant, tubercle-free, plateau-like tumor, with gradual gradation into normal gastric tissue. The submucosa was primarily and chiefly involved. An

overlying crescentic ulcer, with fatty floor and base elevated to the normal gastric level, was characteristic. The microscopic picture was typical. There was a richly cellular infiltration localized about the vessels. The vessels were infiltrated with these cells, their walls were thickened, their lumina partially or completely occluded. Endovasculitis was present, chiefly in the veins. Such a vascular picture, with some vessels entirely normal, others tremendously thickened and invaded with cellular new growth, found in an individual thirty years of age, is that of syphilis. The finding of giant cells and miliary gummata plentifully supplied with blood, verifies the diagnosis.

This surgical case serves to emphasize once more the value of utilizing every available resource in diagnosis of stomach diseases. Syphilis is probably a more frequent cause of gastric tumor than is commonly recognized. Inasmuch as the therapeutic mercurial test is so easily applied, it is at least worthy of consideration in certain selected cases.

PARTIAL MYXEDEMA*

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The morbid conditions resulting from total abolition of the thyroid functions constitute a distinctive and well-known clinical picture. Partial insufficiency of the thyroid gland likewise occurs, in all gradations to complete suppression of its activity, and corresponding partial, incomplete or transitional clinical forms of myxedema are observed ranging in intensity to the typical and complete forms, and in connection with all the varieties of the disease, adult, infantile and postoperative. The symptoms are much less characteristic than in the complete forms, and a clear conception of this class of cases has not yet become crystallized in the professional mind.

Various names have been applied to the condition under consideration. In the English language it is usually called "partial" or "incomplete myxedema," or "partial" or "incomplete hypothyroidism." The usual French designation is *myxœdème fruste,* or the *forme fruste* (as contrasted with the complete form, *myxœdème franc* or *grand*). It is also termed "benign hypothyroidism," "attenuated myxedema," "masked myxedema," etc.

The occurrence of a partial form of myxedema was first recognized by Reverdin,[1] who in 1887 (five years after his epoch-making communication which first showed the relation of myxedema to the thyroid) reported two cases of partial hypothyroidism following thyroidectomy and called attention to the existence of this disorder in the postoperative variety of myxedema. He designated the disorder by the term *fruste,* which became the common name for it in French. In 1891 Thibierge,[2] citing Reverdin's contribution, surmised the possibility of the occurrence of *fruste* cases of the spontaneous adult variety of myxedema, as well as of the operative variety, though he did not report any definite observations. The first actual case of partial adult myxedema, recognized and reported as such, that I have been able to find was one by Chantemesse and Marie[3] in 1894. In England Murray[4] in 1895 announced the occurrence of incomplete spontaneous myxedema, apparently from independent observations. In 1894 Brissaud[5] called attention to the relationship of infantilism to partial thyroid insufficiency. After the introduction of practicable thyroid-gland therapy in 1891 and 1892, a means for definitely recognizing the manifestations of partial thyroid insufficiency became available. Since 1897 a number of observers have reported cases and studies of the disease, both in adults and children.

In considering the reported cases of partial myxedema, it must be remembered that some of the symptoms occurring in particular cases may be coincidental and unrelated to the thyroid. The diagnosis in some of the cases does not seem well substantiated or verified by the results of treatment. Some of the cases may be really instances of complete myxedema observed in the early stage of their development. Yet in spite of doubtful cases and symptoms, there can be no doubt of the existence of partial myxedema as a distinct disorder, with many characteristic or at least suggestive clinical features. Some of the symptoms are similar to those of complete myxedema, only of less degree; other symptoms are of entirely different character from, or even opposite to, those of the complete form. The cases of true partial hypothyroidism remain partial throughout and do not progress to complete athyroidism; it is probable that spontaneous recovery may even occur.

In the partial, as in the complete, forms of myxedema, spontaneous adult, infantile and postoperative varieties occur.

SPONTANEOUS ADULT PARTIAL MYXEDEMA

In this, as in the infantile form, heredity is a marked factor in the etiology. In many of the reported cases hypothyroidism is familial, various members of the same or different generations exhibiting the manifestations of partial or complete thyroid insufficiency. In some instances the hereditary taint is shown by the occurrence of other forms of thyroid disease, as goiter or exophthalmic goiter, in other members of the family. In other cases defective thyroid development has been attributed to the occurrence of tuberculosis, syphilis, alcoholism, gout, cachexias, poverty, etc., in the parents or ancestors.

Females are much more subject than are males to the incidence of spontaneous adult partial myxedema; of 38 cases in the literature, 7 were in males, 31 in females.

The age at which the disorder is most apt to develop seems to be from 30 to 50 years, three-fourths of the reported cases beginning during this period. Thus, in 23 cases in females, 2 apparently developed under 30 years, 7 from 30 to 40, 10 from 40 to 50, 3 from 50 to 60, and 1 from 60 to 70; of 4 cases in males, 1 developed from 30 to 40, 3 from 40 to 50.

The development of partial hypothyroidism does not seem to be definitely caused by any particular disease, though acute infections or the like may doubtless contribute to the production of sclerotic or inflammatory changes in the thyroid or the lowering of its nutrition and activity. A frank or latent thyroid insufficiency seems to be related to the occurrence of many morbid conditions whose dependence on the thyroid is obscure,

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* Read before the Medical Society of the District of Columbia, Nov. 18, 1908.

1. Reverdin, J. L.: Rev. méd. de la Suisse rom., 1887, vii, 275, 318.

2. Thibierge, G.: De la cachexie pachydermique, ou myxœdème, Gaz. d. hôp., Paris, 1891, lxiv, 117; Le Myxœdème, Paris, 1898.

3. Chantemesse and Marie, R.: Bull. et mém. de la Soc. méd. d. hôp. de Paris, 1894, series 3, xi, 124.

4. Murray, G. R.: Twentieth Century Practice of Medicine, 1895, iv, 696; Brit. Med. Jour., Oct. 1, 1898, p. 942.

5. Brissaud, E.: Leçons sur les maladies nerveuses (Salpêtrière 1893-94), Paris, 1895; De l'infantilisme myxœdémateux, Nouv. iconog de la Salpêtrière, 1897, x, 240; Myxœdème thyroïdien et myxœdème parathyroïdien, Presse méd., 1898, i, 1.

perhaps indicating the existence of a radically defective constitution or lessened resisting power.

In a number of cases the myxedematous condition has been preceded by the opposite disorder, exophthalmic goiter. Mixed cases are also recognized ("dysthyroidism") in which mingled manifestations of hyperthyroidism and hypothyroidism are said to occur.

The onset is gradual and insidious and the disease is not usually recognized until long after its development.

The symptoms of partial myxedema are multitudinous and bewildering and cover a wide range of the organic activities.

Asthenia.—This is one of the most common and most prominent symptoms. The patients have a feeling of lassitude, are incapable of much effort, or become inordinately fatigued on slight exertion. In some of the cases weakness or giving way of the knees is especially noted.

Mentality.—The intellect is much less apt to be impaired in the partial than in the complete forms. Many of the patients are entirely normal and some even above the average in intelligence. Impairment of the intelligence or memory, mental sluggishness, apathy, etc., may, however, occur, and even slight hallucinations have been noted. Sleep is variable and not characteristic, some patients suffering from insomnia, some being somnolent; it is apt to be unrefreshing, and the patients may be weaker and have more pain in the morning than later in the day. The characteristic facial expression is described as being one of "sorrowful fatigue."

Pain.—This is a conspicuous and common symptom of partial, more so than of complete myxedema. Recurring headache (both frontal and occipital), backache (especially interscapular), or articular and muscular pains are noted in most of the cases. The pain is sometimes excessive. In some such cases chronic rheumatism is simulated. Some cases are recorded in which attacks of migraine or epileptic paroxysms have been the principal features, though accompanied by other minor hypothyroid symptoms, in which cure or relief has been effected by thyroid therapy. Vertigo and tinnitus aurium have been noted in some cases.

Metabolism.—Metabolism in partial myxedema undergoes a disturbance or diminution similar to that which occurs in the complete form of the disease. A study of the nitrogen exchanges in my case showed the same characteristic metabolism as occurs in complete hypothyroidism; that is, a marked retention of nitrogen under the natural conditions of the disease, and a great increase in nitrogenous oxidation and excretion under the influence of thyroid therapy.

The subnormal metabolism and nutrition is also manifested by the nutritive or atrophic changes that take place in the skin, hair, nails, teeth, etc. These changes may bring about a general appearance of premature senility.

Obesity. — This, another manifestation of sluggish metabolism, occurs in many cases, but is also absent in many. The accumulation of fat may be general, or there may be conspicuous local deposits of adipose tissue, as, characteristically, in the clavicular regions. Adiposis dolorosa is by some regarded as a manifestation of hypothyroidism.

Hypothermia.—In most of the cases thermic disturbances of various kinds are conspicuous and marked. They are probably due to the lowered metabolism yielding an insufficient supply of body heat. In many cases the body temperature is subnormal, though sometimes normal. The extremities may be cold. The patients feel cold, chilly, shivery; are subject to chills and rigors, and may be unduly sensitive to slight exposure to cold, often excessively so. The slightest exposure, such as baring the arms, in some cases brings on chills. The patients protect themselves by wearing unduly heavy clothing, even in comparatively warm weather, and are more comfortable in warm seasons or climates than in cold. Exceptions, however, occur.

Integument.—Changes in the skin, while not so extreme as in complete myxedema, are highly characteristic in partial cases. A yellowish tinge has been noted in many instances. A flushed or congestive area over the cheeks, often with a central patch of dilated venules, is frequently observed. The skin is apt to be dry and harsh, with scaly patches. The perspiration in such cases is scanty, but in some instances it is profuse. Thickening, infiltration and tumefaction of the skin and subcutaneous tissues in localized regions are common and characteristic in many of the cases; the generalized myxedematous infiltration of complete hypothyroidism does not occur. The eyelids may be thickened and stiff, the eyebrows may be elevated (to aid in raising the stiffened upper lids), and the forehead transversely wrinkled. The nose may be infiltrated, the ear lobules thickened, the cheeks full, the chin rounded, the backs of the hands and feet puffy, the ankles, shoulders, jaws or neck tumefied, or other circumscribed regions or plaques of infiltration present. Transitory edemas may occur on the face, or extremities, or diffuse; usually rather firm, indolent, white. The nails frequently exhibit trophic deficiencies, dryness, brittleness, deformity, etc. Characteristic changes in the hair usually occur. The hair may turn gray prematurely, contributing to the precocious senile appearance. It may become dry and brittle and fall out. The hair on the scalp may become thinned, or distinct patches of alopecia may develop. The eyebrows may become scanty and fall out, especially at the outer third, where the skin is apt to show a scaly dermatitis; this *signe du sourcil* is regarded as a very significant symptom. The eyelashes and beard may fall out, and the axillary and pubic hairs often become scanty or altogether lost.

Circulatory System.—Palpitation and tachycardia are frequent; the heart may be weakened and dilated; pain in the cardiac region is sometimes found. Venous enlargements are stated to occur—varices, hemorrhoids, dilatation of the veins on the back of the hands. Vasomotor spasms — chilblains, mortui digiti — may occur. A hemorrhagic tendency is frequently noted. Some anemia may occur; the leucocytes are normal in number, but marked lymphocytosis (up to 60 per cent.) seems to be characteristic. Occasionally the thyroid gland is enlarged, but it is usually normal or diminished.

Alimentary System.—The teeth very often undergo marked caries and decay. The gums may be softened, swollen, reddened and bleed easily. The tongue may be enlarged. Anorexia is often noted. Hypochlorhydria is common. The liver is congested and tender, and cholelithiasis is a frequent accompaniment. Constipation, persistent and obstinate, is a highly characteristic symptom. Some cases of mucomembranous enterocolitis, according to Trémolières,[6] are of hypothyroid causation.

6. Trémolières, F.: L'entéro-colite muco-membraneuse, Paris, 1906.

Respiratory System. — The nasal and pharyngeal mucous membranes are often swollen, the tonsils enlarged, adenoids frequently present, and this locality subject to frequent infections and catarrhs. The thickening of the mucous membranes is probably of the same character as that of the skin. The voice is often husky, or raucous, or muffled, from infiltration of the vocal cords. A sense of tingling of the larynx or constriction of the throat frequently occurs. Dyspnea, brought on by exertion or talking, is an exceedingly common and characteristic symptom.

Urinary Organs and Functions — These are not materially affected, except that the lessened excretion of urea from the lowered nitrogenous katabolism may simulate renal insufficiency.

Reproductive System.—Of symptoms affecting the female sexual functions, uterine hemorrhage is most frequently observed—metrorrhagia, menorrhagia, frequent menstruation, postpartum hemorrhage—a manifestation of the general hemorrhagic tendency in this disorder. In some of the cases, however, the menses were regular and normal, or even scanty. Congestion, swelling and tenderness of the uterus, also retroflexion, have been observed; in several instances there have been uterine fibroids, in one such the tumor disappearing under thyroid therapy.

The advent of the menopause seems to be delayed. Of 13 cases affording data on this point, in 6 menstruation had ceased at ages of from 47 to 52 years, in 7 the patients were still menstruating at the ages of 43, 45, 46 (2 cases), 48, 49 and 51 years respectively. In 6 cases menstruation began at 10, 12, 13, 17 and 18 (2 cases) years.

A relationship between the female reproductive functions and the activities of the thyroid has been supposed to exist, but as to the exact nature of that relationship the evidence and opinions are not altogether harmonious.

That pregnancy and child-bearing have any influence on the development of partial myxedema is not shown by the scanty statistics available. Of 21 cases, 15 occurred in married women, 6 in unmarried. Of 12 cases in married women, 10 patients had borne children, 2 were nulliparous. Adding the unmarried to the nulliparous, 10 cases developed in women who had had children, 8 in women who had not.

The menopause is not a specially etiologic factor; 13 cases developed during the menstrual period, 3 after the menopause.

In some cases the symptoms of hypothyroidism are aggravated during pregnancy and lactation—sometimes taken to indicate a relative insufficiency of thyroid activity in this period; and some of the disorders of pregnancy—constipation, for instance—have been attributed to thyroid insufficiency at this time. In other cases, however, there is said to be relief from the symptoms (as from migraine, articular pains, etc.) during gestation, which is taken to indicate a greater stimulation of the thyroid activity under these circumstances, leading to "autotherapy." Several observers note an exacerbation of symptoms during the menstrual periods, as headaches and huskiness of the voice at these epochs. These periodical outbreaks or intermissions of hypothyroid manifestations coincident with female menstrual or reproductive epochs constitute the class of cases denominated "paroxysmal hypothyroidism."

Not all the foregoing phenomena appear in every case. The particular combinations of symptoms that occur are variable, and the diagnosis may remain obscure until illuminated by the effects of thyroid treatment.

INFANTILE PARTIAL MYXEDEMA

A distinction is made between congenital myxedema, or cretinism, developing at or within a few months after birth, and the so-called infantile form, which develops in childhood at any age prior to puberty. The cases of partial myxedema reported in children are nearly all of the infantile rather than the congenital form.

This variety of partial myxedema seems to occur more frequently in males than females, as of 27 reported cases 16 were male, 11 female. It may begin to develop at any time up to the age of puberty, the child being previously normal. The onset may follow an attack of some acute infection, as measles.

The most typical form of partial myxedema developing in childhood is that ordinarily called myxedematous infantilism, in which to attenuated symptoms of myxedema or cretinism is conjoined the condition of infantilism—by which is meant an arrest or retardation of development, so that the physical and mental characteristics of childhood persist after the ordinary age of puberty.

In this class of cases the figure is short and stunted, stout and obese; the head large; the face large, rounded or circular (the "lunar face"); the eyes well separated; the expression dull and heavy; the facies old for the age. The skin, especially about the face and hands, may be thickened and infiltrated, dry, scaly, itchy. The hair may be scanty, or fall in patches. The veins may be distended, the surface cyanotic, the hands and feet cold and affected with chilblains in winter, and with profuse perspiration in summer. Constipation occurs; the abdomen is often protruding, and with an umbilical projection. The tongue may be thickened, the mucous membranes of the respiratory passages turgid, and adenoids frequent, causing obstruction to respiration. Nocturnal incontinence of urine is often noted. Other symptoms similar to those of the adult form of partial myxedema may occur.

The mentality is sometimes unimpaired, or but slightly affected, as by some slight lowering of intelligence or persistence of childishness in thought, manners and actions. In other cases there is an arrest or retardation of mental development; the child may be tardy in learning to talk, or very backward in learning at school. Sometimes the mental development is permanently arrested, and the subjects never able to advance beyond a certain point, so that a patient over 20 may have the mentality of a child of 10. A fuller degree of mental development may, however, be ultimately, though tardily, attained.

The arrest or retardation of physical development is a conspicuous feature of myxedematous infantilism. Growth may be permanently checked, so that a subject of mature years may have the size, build and appearance of a child of the age at which the disorder appeared. If the case develops early enough the child may be very slow in learning to walk; dentition may be delayed. The epiphyseal cartilages persist long after their usual time of ossification. The voice may retain a childish quality. The hairy system may not develop.

Especially, and almost or quite invariably, is the physical retardation manifested by non-development of the sexual organs and functions. In females this is mani-

fested by non-development of the breasts and pubic hair and retarded beginning of menstruation; or in some cases menstruation never occurs at all, even in maturity. In males the penis and testicles remain rudimentary and of infantile size throughout life, sexual power or impulse is absent, and the beard and pubic hair (secondary sexual characters) are scanty or undeveloped. Males may present a certain effeminancy of voice, appearance and character—"feminism."

Cases of myxedematous infantilism are not observed exclusively in children, but have been reported at the ages of 33, 39, 48 and 66 years, the underdevelopment, rudimentary genitals and history enabling the condition to be sharply differentiated from adult hypothyroidism.

Another definite type of infantilism is distinguished, namely, the type Lorain, described by Lorain in 1870. Opinions are divided as to the extent to which this disorder is dependent on hypothyroidism, but, judging from the improvement that takes place under thyroid therapy, thyroid insufficiency would seem to be at least partially responsible, though doubtless other factors, such as arterial hypoplasia, are also operative.

Infantilism of the type Lorain is characterized mainly by a symmetrical arrest of physical development, and is a form of nanism or dwarfism. The reported cases are nearly all in males. The specific myxedematous symptoms are absent. Men showing this defect have the size of boys, but the facial appearance and actions corresponding to their years; they are miniature or dwarfed men, and have been likened in aspect to men viewed through the reverse end of an opera glass. Genital development may or may not be relatively retarded. They have not the stocky build of cases of myxedematous infantilism, but their physique is slender.

POSTOPERATIVE PARTIAL MYXEDEMA

Of this variety of the disorder the only report which I have found is the original contribution of Reverdin,[1] in which the occurrence of partial myxedema cases was first noted. He described two cases in which symptoms resembling those of the spontaneous adult form of partial myxedema developed after thyroidectomy.

CLASSIFICATION

Attempts have been made to classify cases of thyroid insufficiency, the following being some of the classes distinguished:

Euthyria, normal thyroid activity.
Hypothyroidian temperament (hypothyroidia minima).
Paroxysmal hypothyroidism, associated with female sexual epochs.
Hypothyroid neurasthenia.
Physical and mental retardation of hypothyroid origin.
Myxedematous infantilism.
Incomplete myxedema of adults.
Complete myxedema and cretinism.

TREATMENT

The specific treatment of partial myxedema in all its forms consists in the administration, by mouth, of preparations of the thyroid gland. The daily dose is from 5 to 75 centigrams (1 to 12 grains) of the desiccated gland substance (from sheep), equivalent to five times as much of the fresh thyroid. The administration of thyroid substance requires caution and close observation until the proper dosage for each patient is determined by individual trial. Given in excessive doses thyroid causes unpleasant and even dangerous effects, those of hyperthyroidism, such as undue acceleration of the pulse, great prostration, headaches, sweating, restlessness. Special care is necessary in giving the drug to patients with arterial or cardiac disease, as death has occurred during treatment in such cases. At first the treatment is vigorously pushed, but after the symptoms subside only sufficient thyroid need be given to maintain the patient in optimum condition.

The treatment is highly efficient, and there is a prompt and marked subsidence of the abnormal manifestations. The excessive weight is rapidly reduced, the strength is increased, the nutrition of the skin and hair improves, the pains, constipation and dyspnea diminish, mental and physical development is advanced. Complete recovery, or at least great and highly gratifying improvement, can be confidently expected, though in some cases absolute restoration to normal is not attainable, and vestiges of the trouble may persistently continue.

DIAGNOSIS

I am speaking of diagnosis after treatment because verification or establishment of the diagnosis, especially in cases so obscure and atypical as many of those of partial myxedema are, rests on the results of thyroid therapy. A combination of the cardinal symptoms of asthenia, headache and other pains, obesity, cutaneous infiltration, lowered nutrition of skin and hair, constipation and dyspnea, also mental and physical arrest in children, may be very suggestive; yet the therapeutic test is conclusive. When only a few of the characteristic symptoms are present the diagnosis would be quite uncertain, except from the results of treatment. Whether every case, of whatsoever character, in which there is benefit from thyroid therapy is to be regarded as one of partial hypothyroidism is an open question.

Incomplete myxedema may not be a very common disorder; yet the great relief occasionally obtainable makes the trial of thyroid treatment well worth while in obscure and obstinate cases exhibiting headache, dorsal or articular pains, obesity, constipation, dyspnea, backwardness in children, etc., as conspicuous symptoms.

CASE REPORT

I have had the opportunity of observing a well-marked case of partial myxedema which illustrates a number of the typical characteristics of the disease:

Patient.—Female, unmarried, aged 53 when she first came under my observation, in November, 1905.

Family History.—There was an opportunity for paternal inheritance of syphilis, though no manifestations of congenital syphilis are known to have appeared. The maternal grandfather and six of his sisters died of tuberculosis. The maternal grandmother died at 70 of cancer of the stomach, and other cases of cancer occurred in collateral branches of her family.

Previous History.—The patient has lived in many different parts of the country. In earlier life she was a music teacher; latterly engaged in scientific pursuits. She has always been a hard student, has greatly overworked, and has been exposed to severe family troubles. She is a woman of exceptionally high mentality. Her clinical history is very voluminous. In childhood she had Asiatic cholera, whooping cough, mumps, measles, scarlatina followed by nephritis, fracture of humerus and ribs, malarial attacks, varioloid, frequent headaches, eczema capitis, frequent earaches. Menstruation began at 12. At 26 she had an attack of lung trouble regarded as incipient tuberculosis, from which she rallied in a few months. She has had repeated attacks of chronic staphylococcus infection—styes, furunculosis, repeated axillary abscesses, acne—at 12, 15, 25, 33, 48 and 54 years. She has had chronic or recurring arthritis of the left knee, which kept her in bed or on crutches

for two to fifteen months at a time at the ages of 29, 34, 39 and 54. From overwork and trouble she had attacks of neurasthenia at 19, 33, 40 to 43, and more or less continuously since about her fifty-first year. She had tertian malaria at 41, and a tapeworm at 43 years. Since her fortieth year she has been subject to attacks of pain, numbness, jerking, etc., of her right foot. At 48 years she had a similar attack of pains and numbness, called "neuritis," on the ulnar side of the right arm and hand. Menstruation was always regular, rather scanty and brief (two or three days) and painless.

Her weight, so far as the data available show, ranged from 113 to 133 pounds (minus clothing) to her thirty-fifth year. She then increased to 168 pounds at 39, which was the following year reduced by dieting to 143. At 41 to 43, during one of her severe illnesses, the weight fell to 117 pounds, and afterward gradually rose again.

History of Myxedematous Condition.—It is difficult to fix the insidious beginning of the myxedematous disorder. Certain of the symptoms, however, seem to have developed subsequent to an attack of grip followed by what was regarded as whooping cough (the second attack), which occurred in the winter and spring of 1899-1900, just after her forty-seventh birthday. After this attack there was a n rked increase of weight, which reached 172 pounds in November, 1900. The next year, 1901, while in the Philippines, she had dengue and hematuria (blackwater fever?). Following the cough in 1900, she had pains in the right hypochondriac region, which continued. On June 13, 1902, an appendicectomy was done, with the idea that these pains were due to the appendix, but it was not found appreciably affected. June 25, 1902, cholecystotomy was done, and a large gallstone removed. The hypochondriac pains continued after the operation.

In April, 1902, the patient was told that she had Bright's disease, the urea excretion being stated to be much diminished, down to 4 and even 2 grams daily; casts were at times observed, and occasionally a trace of albumin. She was on a milk diet in 1902-04, and took meat very sparingly in 1904-05. In July, 1902, she had a suppurating right kidney, with pyuria and enlargement of the kidney. In August, 1902, menstruation ceased rather abruptly (age 50).

After the operations and the cessation of menstruation in the summer of 1902 there was another gain in weight, and for a time general improvement, but neurasthenic and other symptoms continued, and during the years 1903, 1904 and 1905 a partial myxedematous condition developed and became well established.

During this period the patient suffered marked asthenia, fatiguing easily on physical exertion. Her facial expression I would describe as one of placid fatigue. Mental impairment was very slight; there was some lessening of mental alertness and of continuity of thought and speech, slight forgetfulness, and easy fatigue on mental exertion; but she was at the same time engaged in intellectual and scientific work of high order. The only pains apparently referable to the hypothyroidism were the right hypochondriac pains and pains in the upper left chest. There was no headache or backache, aside from two or three attacks of lumbago, 1904-05. The patient had pains in her left knee in connection with her long-standing arthritis; also "neuritic" pains in right arm and leg, probably independent of the hypothyroid condition.

Fig. 1.—From photograph of patient with partial myxedema, taken in November, 1905, prior to the institution of thyroid treatment.

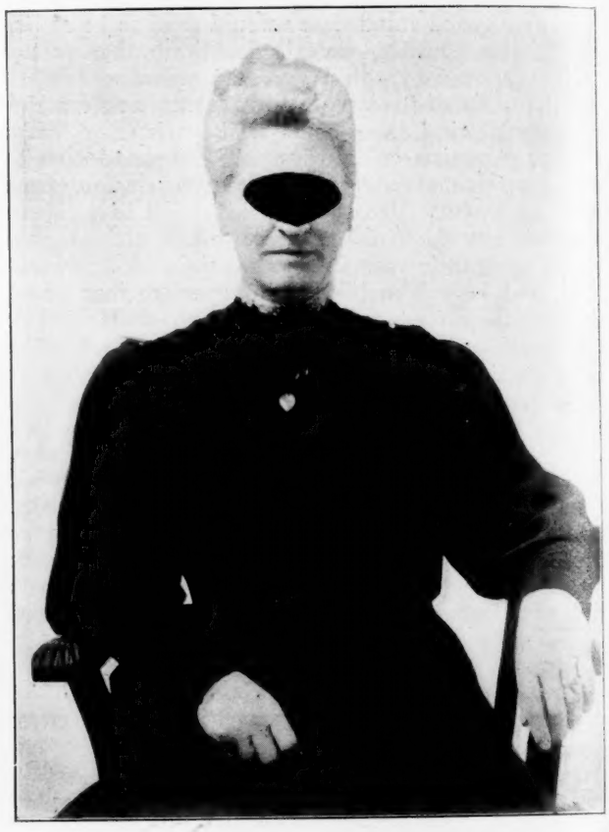

Fig. 2.—From photograph of same patient as in Fig. 1, taken in May, 1908, twenty-nine months after beginning thyroid treatment. The chair and the position of the body were the same in the two pictures.

She had vertigo and tinnitus aurium from 1901. Her weight gradually increased until at the beginning of thyroid treatment it reached 214 pounds (minus clothing); height being 5 feet 2¾ inches. The deposition of fat was general, giving a massive and bulky physique; there were voluminous clavicular accumulations of fat.

For many years, from 1893, the patient stated, the body temperature tended to subnormal; and she was unable to take her accustomed cold baths from 1893 until thyroid treatment in 1906. After 1902 she became exceedingly sensitive to cold, wore unduly heavy clothing, and suffered chills and rigors on slight exposure.

The skin after 1901 turned a dirty yellowish color; it became dry and scaly over the extremities, so that rubbing the arm would produce a white powdered appearance. The perspiration, previously profuse, diminished in 1903-05. There was puffiness of the eyelids, face and back of hands; the lids and lips felt stiff. The patient had occasional transient edemas about the ankles, hands and face, pitting on pressure. There was no flush over the cheeks. The nails became brittle. The hair on the scalp, previously very oily, became harsh, dry and "dandruffy," and turned markedly gray in 1903; there was no change in the hair elsewhere.

Palpitation of the heart developed. No hemorrhagic tendency was evinced. A differential count made in September, 1905, showed the existence of a marked lymphocytosis (lymphocytes, mononuclears, and transitionals 58 per cent.). The teeth suffered marked decay. The gums, tongue and naso-pharynx exhibited no change. There was slight anorexia. Marked constipation began 1903, with hemorrhoids. The voice was not affected. A sense of constriction of the throat was caused by slight pressure of collar buttons, clothing, etc., over the larynx. The patient suffered marked dyspnea on exertion, and especially on talking.

The patient came under my observation in November, 1905, presenting the multiplicity of symptoms just detailed, which had gradually increased to a maximum. No special organic abnormalities were found to account for the symptoms. Blood pressure was 150 mm. Examination of the stomach contents revealed a hypochlorhydria (total acidity was 28). The general clinical picture seemed to be that of neurasthenia. The patient believed herself to be suffering from chronic nephritis; but repeated examinations of the urine, even with an increased nitrogenous diet, showed no evidence of renal involvement. Careful comparison of the urea output with the nitrogenous intake in the food showed a nitrogen retention, which in the light of later developments is to be interpreted as a result of subnormal proteid oxidation and not a result of renal insufficiency.

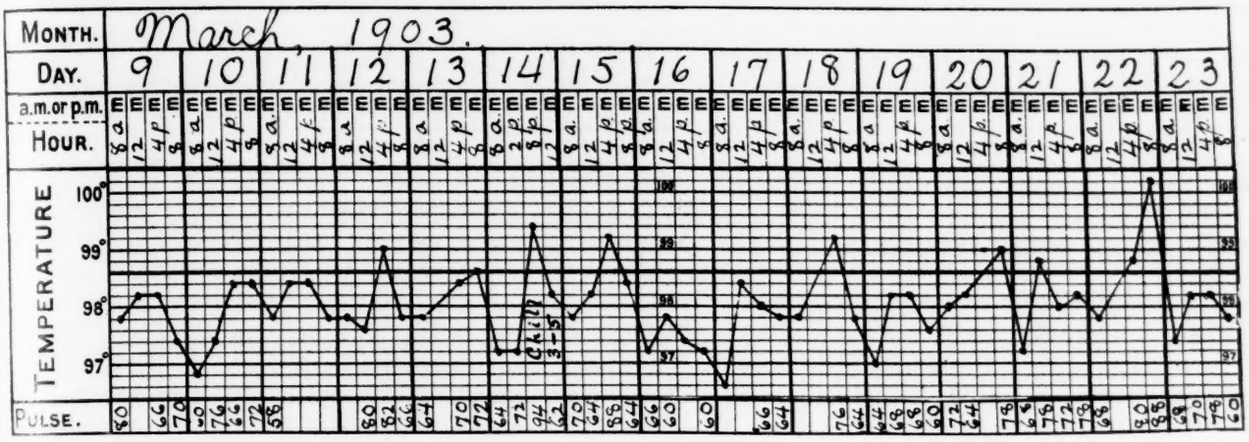

Fig. 3.—Chart of temperature in period of partial myxedema, while patient was untreated, showing subnormal temperature.

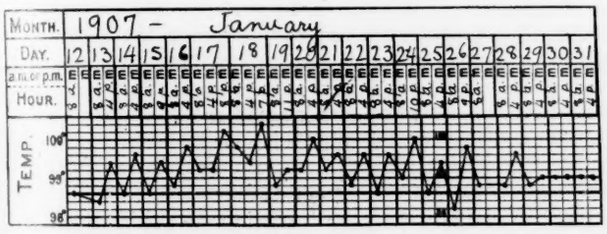

Fig. 4.—Chart of temperature while patient was under full influence of thyroid treatment, showing supranormal temperature.

Treatment.—Tonics, sedatives, iodids, etc., made no impression. In the latter part of January, 1906, the administration of thyroid was instituted, more with the hope of reducing the obesity than with a realization of the general hypothyroid basis of most of the symptoms. Except for some interruptions for experimental purposes, the administration of thyroid has been continued ever since, in doses ranging from 15 to 2 grains of the desiccated gland substance daily. The striking results of this treatment warrant the diagnosis of this case as one of incomplete myxedema, probably associated with neurasthenic manifestations.

Course of Disease.—The patient's weight, which was 214 pounds at beginning of treatment, in two months fell 23 pounds; remained stationary for three months; then steadily declined until on Dec. 31, 1906, it reached 159 pounds. During the year 1907 the weight declined 10 pounds more, reaching a minimum of 149 pounds on Dec. 31, 1907, a total lowering of 65 pounds. The weight has since continued at about 150 pounds.

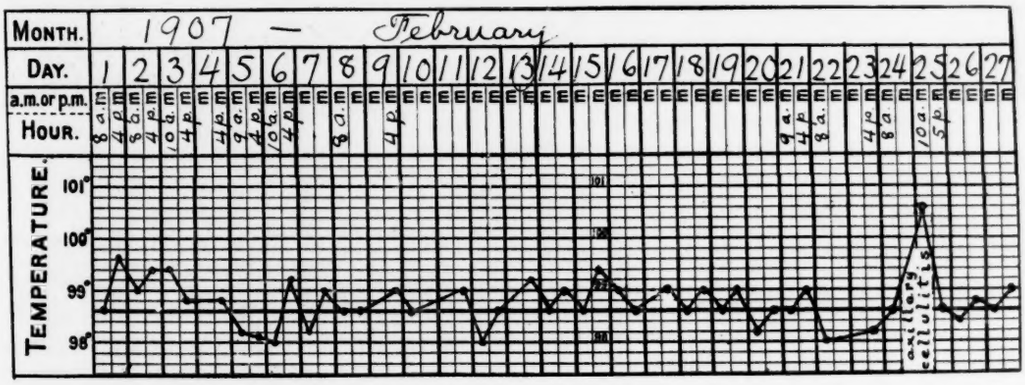

Fig. 5.—Chart of temperature during a period of suspension of thyroid treatment (administration of thyroid discontinued Feb. 1-28, 1907), showing a normal range of temperature.

Along with the loss of weight there was in the course of a few months' treatment a subsidence of the other symptoms, some in part, some completely. The physical asthenia on exertion diminished considerably. The slight mental symptoms subsided entirely. The pains in hepatic region and left chest, the vertigo, and the tinnitus aurium ceased. The body temperature from being subnormal ranged above normal (mostly 99 to 100) during the administration of thyroid. The chilliness and sensitiveness to cold entirely disappeared, and the patient was able to resume cold bathing.

The yellowish color of the skin persisted; but the dryness and desquamation of the skin and brittleness of the nails subsided, and perspiration increased. The puffiness of the skin mostly subsided; a little thickening of the nose continues, and transient edema still occasionally occurs, though much less than previously. The hair fell out freely under the thyroid treatment, but grew out again, softer and less dry. The cardiac palpitation has subsided. Blood pressure has been 110 to 125. The lymphocytosis has continued, the percentage of lymphocytes and mononuclears, large and small, being 50 per cent. Aug. 16, 1906; 43 per cent. Nov. 22, 1907; and 55 per cent. Nov. 13, 1908. The numbers of red and white cells on these dates were normal. The condition of the teeth improved. The anorexia, constipation and sense of constriction in the throat disappeared. The dyspnea greatly improved, but has not entirely ceased.

A study was made of the nitrogen metabolism for two three-day periods, one while the patient was taking thyroid, the other while its administration was suspended. The same diet was taken during both periods, and for three days preceding each period, namely, 1 liter of milk, 4 eggs, 300 grams of Vienna bread and 30 grams of butter, on each day, yielding (by calculation) 1930 calories and 13.9 grams of nitrogen. The results were as follows:

NITROGEN METABOLISM

Date. 1906	Conditions of Experiment.	Nitrogen Intake. Food. Gms.	Nitrogen Output. Feces. Gms.	Urine. Gms.	Total. Gms.	Nitrogen Gain or Loss. Gms.
June 15..	No thyroid taken	13.9	1.1	10.1	11.2	+2.7
June 16..	May 22 to	13.9	1.0	10.0	11.0	+2.9
June 17..	June 18:	13.9	1.1	9.3	10.4	+3.5
	Average per day...	13.9	1.1	9.8	10.9	+3.0
July 14..	Thyroid taken	13.9	1.5	11.5	13.0	+0.9
July 15..	since June 19:	13.9	1.4	10.8	12.2	+1.7
July 16..		13.9	1.5	14.2	15.7	—1.8
	Average per day...	13.9	1.5	12.2	13.7	+0.2

This result shows a marked retention of nitrogen while the patient was not under treatment, with a markedly increased metabolism and oxidation of nitrogen while under the influence of thyroid medication, and agrees with the characteristics of the metabolic conditions that prevail in myxedema in general.

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THE DIAGNOSTIC VALUE OF URETERAL CATHETERIZATION

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At the time of the greatest activity in this field of work abroad, and with the birth of it in this country, I became interested in following cystoscopy and ureteral catheterization to the present.

In 1897 I wrote on this subject, and three years later perfected my double catheterizing cystoscope. Before and since this time much has been accomplished, and it seems almost useless to enlarge again on the diagnostic value of cystoscopy and ureteral catheterization; and such would have been my opinion had I not recently listened to one of our most learned internists from Boston, who, in his paper on "The Degree of Functional Ability of the Kidney," took up one by one of the methods at our disposal, such as cryoscopy of the blood, cryoscopy of the urine, the ingestion of anilin dyes, and disposed of all as not giving trustworthy conclusions. The three latter methods require catheterization. To catheterization of separate urines he gave the most credit, but concluded that it was wrought with much danger and therefore unsatisfactory. With this I could not agree, and a number of other questions connected with the subject made me feel that the present status of the question should be well defined.

In order to get other views to corroborate my experience and conclusions I have addressed fourteen physicians in this country, all of whom have a wide experience in the use of the ureteral catheter, and asked them for their answers to six questions. I received replies from thirteen, namely: Dr. Howard A. Kelly, Dr. Willy Meyer, Dr. Eugene Fuller, Dr. F. Tilden Brown, Dr. Hugh Cabot, Dr. John B. Murphy, Dr. George R. Swinburne, Dr. R. Guieteras, Dr. H. E. Hayd, Dr. Winfield Ayres, Dr. Follen Cabot, Dr. W. F. Braasch for Dr. Charles H. Mayo, and Dr. Bransford Lewis.

Q. 1.—How frequently does a secondary infection occur in the healthy side when one infected kidney exists and no instrumentation employed?

A.—The bulk of the evidence summarized would show the occurrence to be rare, particularly if the bladder is not infected. It is more common by systemic or (hematogenous) conveyance than through the urine. It has been observed in calculus and tuberculosis of the kidney. Only one observer (Dr. Lewis) answers that it is common. It is probable that he sees many cases of pyonephrosis with calculus and tuberculosis in a late stage. Secondary infection being of rare occurrence we must conclude that the healthy side is very tolerant and not easily infected.

Q. 2.—Should infection occur at all following catheterization of the ureters when no prior infection exists?

A.—All answer this in the negative. This conclusively shows that catheterization is practically harmless in a healthy individual and so may be done for diagnostic reasons or for demonstration and teaching.

Q. 3.—One side being infected, how frequent is infection of healthy side produced by catheterization?

A.—Ten never knew it to occur. One: "Can't answer." One: "Never if bladder is healthy." One: "Most infrequent, no personal experience of occurrence."

This is certainly overwhelming evidence of its usefulness and safety.

Q. 4.—Knowing one side to be infected, can one rely on catheterization of this side alone, leaving the other side to be represented by a catheter in the bladder?

A.—Seven answer: "No." Three: "If bladder is not involved." One: "In some cases." One: "If urine from catheter in bladder is normal." One: "If catheter is inserted high in ureter and if bladder is healthy."

From these answers one must conclude that it is necessary to catheterize both sides in the majority of cases. Particularly since we know the bladder or its contents to be infected in most cases.

Q. 5.—After nephrectomy without resection of the ureter or injection of same toward the bladder with pure carbolic acid, is it not common to have pus in the urine coming from ureter so left?

A.—Six say: "Yes." One: "Yes if pyelitis existed." Two: "Yes in tuberculous cases." "One: "Majority for short time, persists in few." One: "Yes for few months." One: "No." One: "No. Observed, however, in two cases pyonephrosis."

This being answered by almost all in the affirmative, it seems best surgery to resect the ureter and inject any portion remaining with carbolic.

Q. 6.—If infection of healthy side does occur should one expect marked symptoms and should these follow soon after the instrumentation?

A.—Nine: "No such experience." Four: "If it occurs, marked symptoms soon."

Thes answers imply that such an accident must be very rare and that should it occur marked and rapid symptoms should be expected.

These six questions cover, as I intended they should, every possible point on which a question of justification for this procedure can be raised, and I am most grateful for the responses received.

In order to have experts available in this field it is essential that all work in the smaller cities be turned over to one or two men who are willing to give it their earnest attention. No man who has not had good surgical training should attempt this work.

Having established the usefulness of this procedure and almost conclusively proven its safety when done by one trained for the work, we are ready to look into the bladder and see what can be learned from the use of the ureteral catheter.

We will spend no time in determining or discussing which medium, water or air, or direct or indirect view, is best. It matters not what instrument is used so long as the operator who uses it can get results. For a long time I used air only, but of late have found many instances in which I prefer to use water to distend the bladder.

An examination of the bladder is in a way unavoidable while catheterizing the ureters. The condition of the mucous membrane, the presence of cystitis, ulcer, polyp, tumor or stone, the existence of diverticuli, or sinuses connecting with another viscus may be recognized. The jet of urine as it spurts from the ureteral opening without the entrance of the catheter often makes clear a vague pathologic kidney condition. I have twice seen the expulsion of a calculus through the dilated ureteral opening. A tuberculous kidney can often be diagnosed by the appearance of the mucous membrane about the ureteral opening in the bladder. Recently I saw a picture on looking into the bladder that showed such an amount of venous stasis from pressure of a large renal growth of the left side that the veins honeycombed the surface of the mucosa so extensively that the bladder seemed trabeculated. On dilating still further the pressure from within entirely overcame the condition. Stricture of the ureter at its opening or along its tract gives symptoms long before any marked destruction of the kidney occurs, and when relieved naturally avoids the loss of the kidney and often the life of the patient. Obstruction of the ureter by calculus, kink or pressure from extrinsic tumors are diagnosed. Sacculations of the ureter with pus pockets are made out by the flow of pus in good quantity before the catheter has reached the pelvis with a cessation of flow on passing beyond the pocket. Pyelitis, pyonephrosis, hydronephrosis, pyonephritis and calculus are easily distinguished, and in some instances even before the urine is microscopically examined. The microscopic examination of the urine so drawn in the hands of experts will to-day differentiate the various pathologic kidney lesions.

Bacteriologic examination even more than the above gives the greatest amount of information concerning the various infections with which the human genito-urinary tract abound. The distention of the kidney pelvis with a small quantity of sterile water or antiseptic solution will often reproduce exactly the symptoms that exist during an attack. Leaving the catheters in place for several hours gives a very good comparative test of the functionating power of each kidney, and if the diseased organ is not functionating all the more reason for its removal. The first urine escaping from the catheter is often stained with blood and should not be retained for examination unless the bleeding persists. A few blood cells found microscopically and no other renal elements should not be taken to signify a pathologic condition.

Lastly, the introduction of the ureteral catheter prior to performing complicated pelvic surgery or hysterectomy is a safe guide in avoiding injury to the ureter. I have once seen the ureter cut in a Kraske operation. Even though it was successfully transplanted it would not have happened had there been the catheter as a guide.

Till some better method is at our disposal let us take the optimistic view of this procedure which, I feel, is to stay supreme for a long time.

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SYSTEMATIZED TECHNIC OF SUPRAPUBIC PROSTATECTOMY

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Since the inauguration by Belfield of the suprapubic operation for relief of prostatic hypertrophy, and its further development by McGill, Freyer, Guiteras, Burckhardt and others, a certain standstill seems to have taken place in the further elaboration of its technic, while perineal prostatectomy has become a competitor, especially since the Zuckerkandl, Rydygier, and the French technics were adapted and amplified by Young.

The definite success of suprapubic prostatectomy will depend, as that of other surgical methods, on the reduction of primary mortality and the securing of good and permanent functional results. An analysis of the basic factors on which these two issues depend will show the way to their improvement.

Primary mortality is essentially influenced by the immediate and remote dangers of anesthesia, by hemorrhage and by infection, especially of the peritoneum and the prostatic venous plexus. The primary mortality is, furthermore, influenced by the length of time patients are kept in bed after operation; old individuals, whose hearts and excretory organs are, if not already materially injured, certainly impaired in resistance, do not very well stand a prolonged confinement in bed. The functional results depend on the extent and nature of the surgical injuries inflicted on the tissues by the operation and on the conditions resulting therefrom. Bruising and tearing the tissues will not only interfere with quick healing, but will also tend to result in cicatricial distortions which will impede the urinary flow. If favorable conditions for the obliteration of the bed of the prostate are not secured, that cavity will remain a granulating basin in which stagnation of the urine, with all its undesirable consequences, will again occur.

The working points, from a consideration of which the evolution of a successful technic could be developed, might be enumerated as follows: In order to reduce to a minimum the primary and remote dangers of anesthesia, nitrous oxid and oxygen narcosis should be employed. The absence of pronounced or prolonged malaise after this anesthetic enables the patient to take food and drink very soon after operation. The absence of prostration and stupor, so common after ether or chloroform, does away with paresis of the intestines and renders it possible to start out a few hours after operation with the regular breathing exercises so important in old patients. Since nitrous oxid does not attack the heart muscle, the circulation is left unimpaired and hypostatic pneumonia and embolism do not occur. All these conditions make it possible to let the patient sit up twenty-four hours after operation and to begin taking him out of bed on the third day.

In order to prevent involvement of the peritoneum by an infection which might already have existed in the bladder or which might appear during the course of the healing process, the peritoneal duplication should, before the bladder is opened, be removed from the field of manipulations and should be entirely and securely secluded from the operative wound. In order to prevent tearing and subsequent thrombosis and infection of the prostatic venous plexus, the shelling out of the prostatic tumor should be done in such a way that this plexus is never touched. In order to prevent superficial necrosis of the denuded surfaces and to foster their quick healing, all traditional drainage of the perivesical spaces should be abolished; such drainage, furthermore, leads quite often to infection of the concerned cavity from without. In order to create in the operative field conditions most favorable for obtaining good functional results, the various operative steps should be adapted to the specific character of the prostatic hypertrophy encountered. The recognition of such conditions can be obtained only if the prevailing formations can be not merely palpated, but also seen, for faultless technic depends on the possibility of doing all the operative steps under the guidance of the eye. This means that the inside of the bladder must be freely exposed through a liberal incision; the incision leading down to the prostate and the subsequent enucleation of the tumor can then be modified according to the conditions peculiar to the case.

A comparison of the technic of various surgeons as gleaned from personal observation and from publications, together with a study of the different types of prostatic tumefaction, as well as various attempts to adapt the different steps of the operation to the abovementioned demands and points, led me to the development of a certain technic in my cases which has so far proved very satisfactory. It is my purpose, first, to describe the steps of this operation as they are common to all the cases, after which the modifications rendered necessary by the peculiarities of various types will be specified.

Previous to the opening of the abdomen, the bladder is filled with a lukewarm 2 per cent. collargol solution; the amount of fluid injected depends on the condition and size of the bladder. The injection of this fluid should be kept up until the bladder is moderately distended; in other words, until the muscular resistance of the bladder against further distention is perceived; it is, therefore, best, before the patient is anesthetized, to make this injection with a smoothly running hand-syringe. The catheter used for injection is left in place and, in order to prevent its slipping out, a gauze strip is tied around the penis just tightly enough to prevent any dislocation of the catheter. Care should be taken not to strangle the member by this manipulation; otherwise extensive subcutaneous hemorrhage or edema might follow. If a soft rubber catheter is used, the escape of the fluid is prevented by tying a loop in its distal end; in case an elastic Mercier is employed, it is closed by a little wooden stopper. Even in cases that do not permit of any distention of the bladder on account of certain inflammatory conditions, a catheter is inserted and left in place so as to mark the internal urethral opening after the bladder is once incised. The patient is then anesthetized and afterward placed in Trendelenburg's position.

A median incision over the region of the bladder is now made through the skin; this incision goes well down to the symphysis and is carried upward above the border of the bladder dulness. The incision must be of this extent, because its upper end, as will be shown later, is closed up again before the bladder is opened, and sufficient space must be reserved for the ensuing manipulations. The subcutaneous fat and fascia are also split with the knife and all bleeding points carefully attended to. The muscles appearing in the bottom of the wound are separated by blunt dissection, exposing the perivesical and preperitoneal fat and the peritoneal duplication. Both the recti are now drawn aside by retractors and the perivesical fat and the peritoneal fold are stripped together from the bladder and then pushed upward by means of a gauze sponge; this detaching is carried on until the whole anterior aspect of the bladder is freely exposed. The perivesical fat and the peritoneal fold are then caught in a suture running transversely from the uppermost part of the edge of one rectus, through the fat and the fold, to the uppermost part of the edge of the other rectus. An assistant pushes this entire flap underneath the muscles while the suture is tied. Two more

sutures reunite the fascia and bury the flap completely, so that from now on the peritoneum is kept absolutely out of the field of operation and out of the reach of any existing or subsequent infection. Two sutures are now inserted at either side of the intended bladder incision pretty close to the symphysis; these sutures are later on used as guy-ropes for lifting up the edges and the base of the bladder after the viscus has been opened.

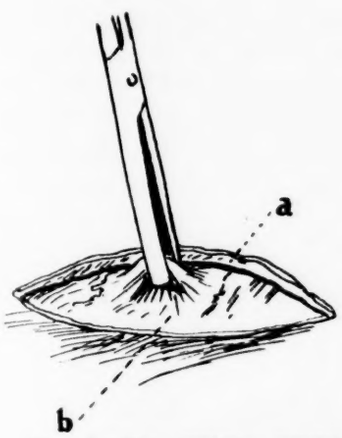

Fig. 1.—The prostate exposed through the mucosa incision and seized by vulsellum; a, edge of severed mucosa; b, prostate.

Fig. 2.—Partial enucleation of the prostate and lifting up of the loosened part of the gland above the incision; c, prostate.

The bladder is then incised in a vertical line by means of a pointed bistoury. The fluid pouring out of the bladder is taken up by gauze pads until everything inside and outside of the bladder is perfectly dry. The

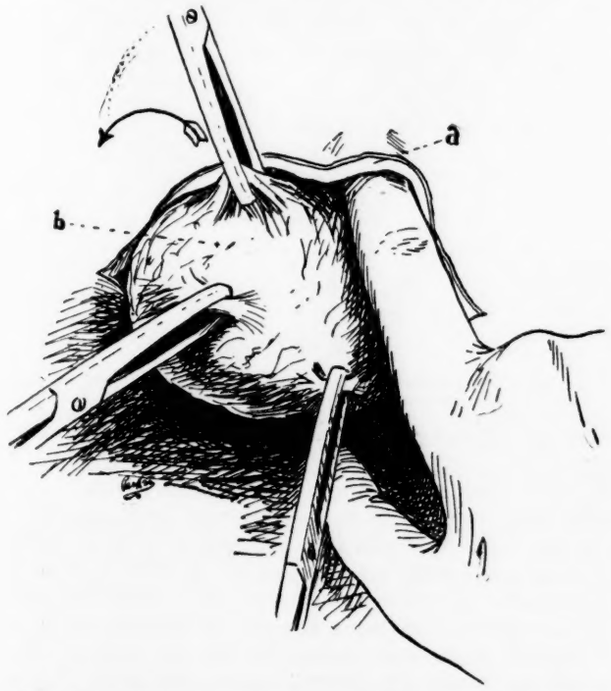

Fig. 3.—Further progress of enucleation; a, vesical mucosa; b, prostate.

incision in the bladder wall is then enlarged until the base of the bladder and the internal urethral orifice are brought into plain view.

A Simons or Martin vaginal retractor is now inserted in the upper angle of the bladder wall while the lower angle is stretched and pushed back by the insertion of a bayonet-shaped vaginal lever; in this way the field of the endovesical operation is made satisfactorily accessible. The tip of the catheter plainly marks the internal urethral orifice, while the intraureteral ligament and the ureteral openings can also be readily seen. This free exposure of the inside of the bladder also makes it possible to avoid incising the atheromatous arteries which quite frequently run over the prostatic region.

The nature of the prostatic tumefaction we are dealing with is now determined by inspection and palpation; this information, together with the above-mentioned landmarks, enables us to

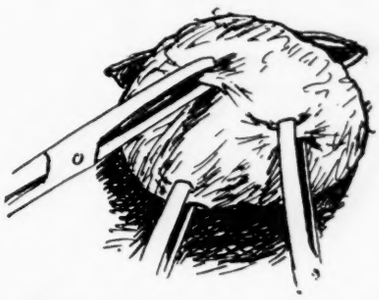

Fig. 4.—Prostate delivered in front of the mucosa incision.

decide whether a partial exsection is sufficient, as is sometimes the case, and just where the incision into the vesical mucosa can be made to the best advantage.

The introduction of one or two fingers of the operator into the rectum, in order to push the prostate upward, I have abolished entirely as non-aseptic. Only in rare cases of very soft prostates it might seem to be to advantage to mark the prostate better by such a manipulation, and then the fingers of an assistant should be made use of for this purpose. The prostate is fixed and lifted up into the field of interference by grasping its most prominent part by means of a vulsellum, after which an incision is made with a knife into the mucosa of the bladder at the selected place. The use of the finger-nail, instead, in digging down through the mucosa to the prostate is clearly a surgical impropriety. Bruised and torn tissue does not heal readily, and the statement that it is easier and safer to find the right cleavage between the mucosa and the prostate by means of this blunt digging does not hold good if one operates under the guidance of the eye. I think, furthermore, that at the present time few surgeons, at least no American surgeons, would operate without rubber gloves, which fact would certainly make this digging more difficult and time-wasting. The incision should not be made too short, for if the tumor is forced through a small opening tears in the mucosa might result, although the elasticity of the mucosa insures a certain amount of stretching.

The incision into the mucosa is deepened until a white layer appears. There are now two possibilities: If the incision has been made over a portion of the tumor that protruded prominently into the viscus, the true capsule of the prostate will be immediately recognized from the fact that the palpating finger does not find a movable layer over the prostate, whereas, if the incision has been made near the base of a prominence, the first white layer to appear is the so-called sheath

of the prostate, recognized by its mobility over the underlying prostate and its true capsule. In case this sheath is encountered, it is also split by the knife, and the prostate, covered by its adherent true capsule, appears in the incision. This exposed portion of the prostate is now seized with a vulsellum and dragged upward under moderate tension (Fig. 1).

A poker or the tip of the index-finger is then introduced back of the vulsellum, between the prostate and the mucosa and sheath, and the covering layers are stripped from the gland (Figs. 2 and 3). Two principles should be kept in mind during this proceeding: The prostate with its capsule should be enucleated from the sheath formed by the rectovesical fascia, and the enucleation should proceed from the posterior surface of the tumor toward the symphysis. While this enucleation is being carried on, the gradually appearing parts of the prostate are seized progressively by vulsella and lifted out in the general direction of the enucleation while the index-finger, by slitting motions, detaches it from its surroundings.

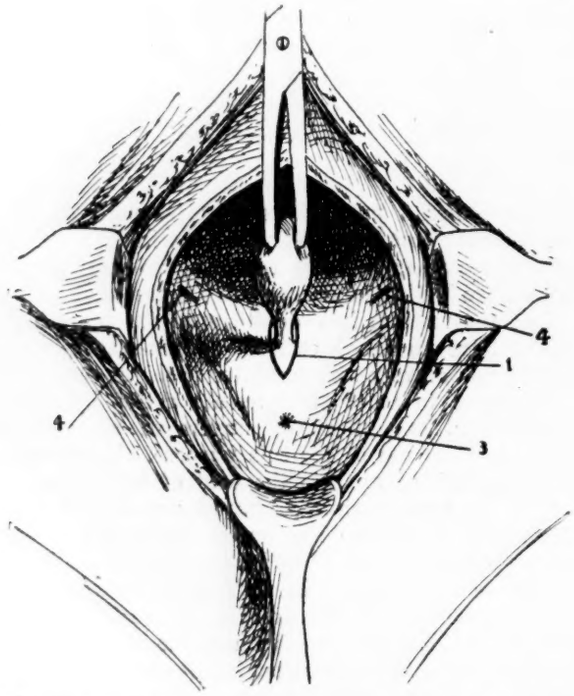

Fig. 5.—Solitary pedunculated excrescence of the prostate; 1, incision in vesical mucosa; 3, urethral orifice; 4, 4, ureteral openings. Half-schematic drawing.

Thus the enucleation is done under the constant guidance of the eye. One should be careful to watch for tissue strands running from the capsule of the prostate to its sheath; these strands should not be torn, but should be severed with a knife or curved scissors. In this way injury to the sheath and breaking into the prostatic venous plexus are avoided. After the entire prostate is freed and lifted up, the finger detaches it from the triangular ligament. This is the only step of the enucleation that has to be done in the dark and by palpation alone; no difficulty is encountered, however, because by this time the entire prostate has been developed into the cavity of the bladder and no possible harm can be done by rolling it off from the ligament (Fig. 4). This enucleation almost always produces the organ *in toto*. Should such not be the case the remaining portion is again seized by a vulsellum and removed in the same manner. The index-finger is then reintroduced into the cavity and a careful search is made for small nodules which are occasionally left in the depth. These also are enucleated with the index-finger in order to avoid a recurrence of the tumefaction. After all this is done the bladder and the prostatic side are flushed out with a hot 2 per cent. collargol solution until the fluid returns clear. Everything is then dried by means of large gauze sponges and the catheter is removed.

The mucosa flap covering the prostatic cavity, which by this time has shrunk considerably, is now pressed down toward the underlying tissue and kept in this position by packing the bladder with a wide strip of very weak iodoform or of similar gauze. The end of this strip is led to the surface and the bladder closed with catgut sutures, save for a little gap in the vertex which permits the emanation of the gauze. These sutures are inserted in such a way as to bring the denuded surfaces of the muscularis together and to avoid any impaction of the mucosa. After the bladders of

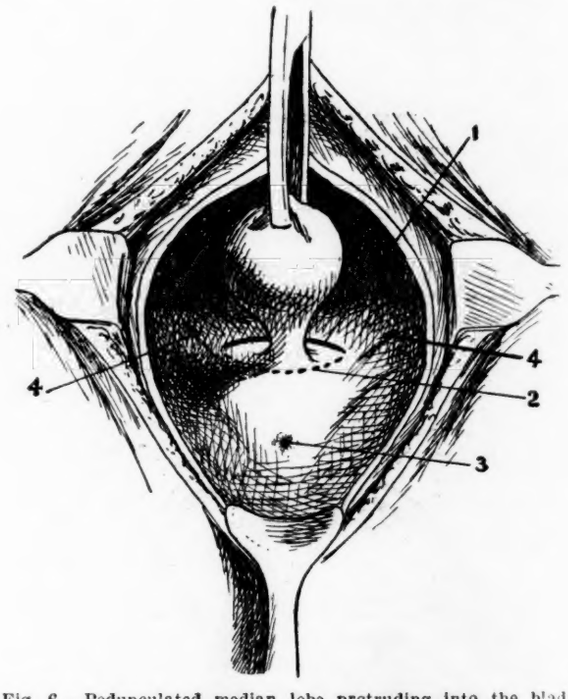

Fig. 6.—Pedunculated median lobe protruding into the bladder coincident with general hypertrophy of the prostate; 1, first incision into the vesical mucosa; 2, occasionally necessary incision; 3, urethral orifice; 4, 4, ureteral openings. Half-schematic drawing.

old people are opened the mucosa will as a rule detach itself spontaneously from the muscular coat, appearing as a fine border; if not, it is detached to a small extent with a knife-handle or small poker in such a manner that when the sutures are inserted the mucosa lips will fold themselves together and protrude like an edge into the cavity of the bladder. After this the fascia of the muscles is reunited by catgut sutures up to the drainage openings; the skin is then closed in the same manner.

The gauze strip just mentioned also serves the purpose of leading the urine out of the bladder until natural urination takes place. It is not only unnecessary but also disadvantageous to insert a rubber tube deep into the bladder, as this necessitates leaving a larger opening; moreover, the pressure of such an extraneous

body often leads to necrosis. One should not forget that the bladder, being a contractile organ, drains itself, as it were.

I have entirely abandoned both suspension of the bladder to the abdominal wall and drainage of the perivesical space. The suspension of the bladder tends to excite spasmodic contractions of that organ which interfere with the knitting together of the tissues and cause pain and discomfort to the patient. I was induced to do away with drainage of the perivesical space by the fact that in my experience this space is entirely obliterated by natural pressure after the patient is brought back into a recumbent position, and that the abolition of drainage leads to quicker healing. This observation was also made and published by several German surgeons.

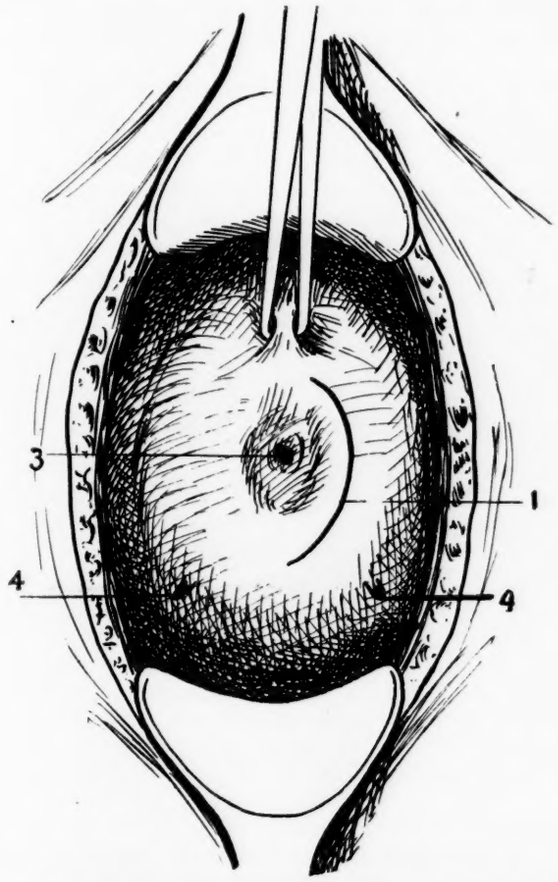

Fig. 7.—Ring-shaped hypertrophy of the prostate surrounding the whole prostatic urethra; 1, incision through vesical mucosa; 3, urethral orifice; 4, 4, ureteral openings. Half-schematic drawing.

An extremely vital step in the operation is the determination of the location of the incision through the vesical mucosa, for the proper selection of this location ensures a greater facility in enucleating the tumor and the most favorable conditions of the cavity and wound after removal has been completed. The importance of a definite diagnosis after opening the bladder is exemplified by the type of prostatic obstruction illustrated in Figure 5, which shows the protrusion into the bladder of the median lobe of an otherwise untumefied gland in such a way as to act like a ball-and-socket valve. In a case like this it would be absolutely unnecessary to remove the entire gland, the exsection of the pedicle of this lobe, as indicated in Figure 5, being sufficient. The pedicle is circumscribed by an oval incision and a wedge-shaped piece of the underlying tissue is exsected in continuity with the pedicle. The resulting wound is then firmly closed by a few deep catgut sutures and the bladder sewed up completely. As a rule patients urinate naturally a few hours after operation; in the rare cases in which they are unable to do so the bladder is emptied at proper intervals by means of a soft catheter. A permanent catheter should never be employed.

Another type is seen in the development of a more or less distinctly pedunculated median lobe in addition to hypertrophy of other parts of the gland, and is marked by the pushing of the base of the bladder into the cavity (Fig. 6). In such an event the protruding lobe is seized at its top by a vulsellum and dragged upward until the basal mucosa becomes tense. A crescent-shaped incision into the mucosa is then made somewhat distant from the base of the pedicle, as indicated by the heavy line in Figure 6. After the prostatic surface is exposed the gland is enucleated in the manner described above. The enucleation often runs along quite smoothly until the junction of the bladder mucosa with the tumor in front of the pedunculated lobe is reached. If the detaching of this part of the mucosa seems difficult, or if the resulting anterior flap appears a little too large, the mucosa is severed by an incision indicated by the dotted line in Figure 6.

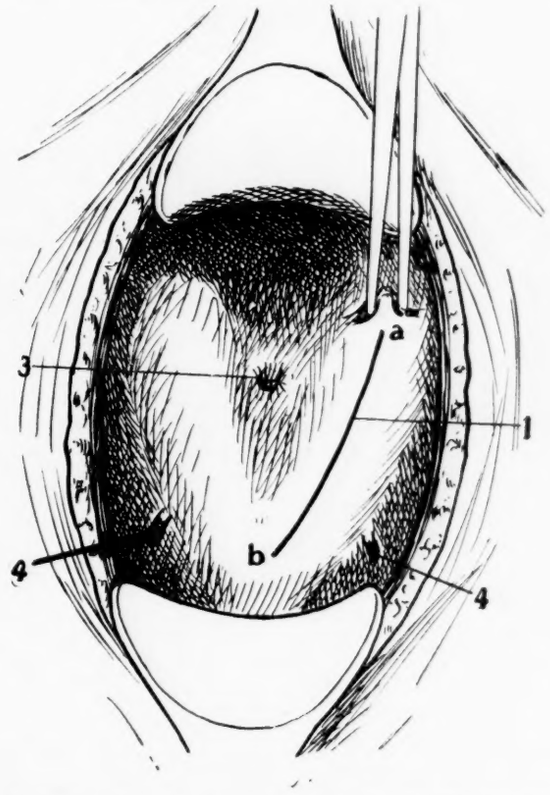

Fig. 8.—V-shaped hypertrophy of both lateral lobes; 1, summit of lateral lobe; a, b, incision through vesical mucosa; 3, urethral orifice; 4, 4, ureteral openings. Half-schematic drawing.

In those cases in which the anterior portion of the prostate also participates in the enlargement, so that a hypertrophied ring encircles the whole urethra, the incision through the mucosa is best made in such a way as to half encircle the urethral opening; this semicircular incision is made either to the right or to the left, according to the side of greater prominence (Fig. 7). Here, too, the enucleation of the prostate is done under

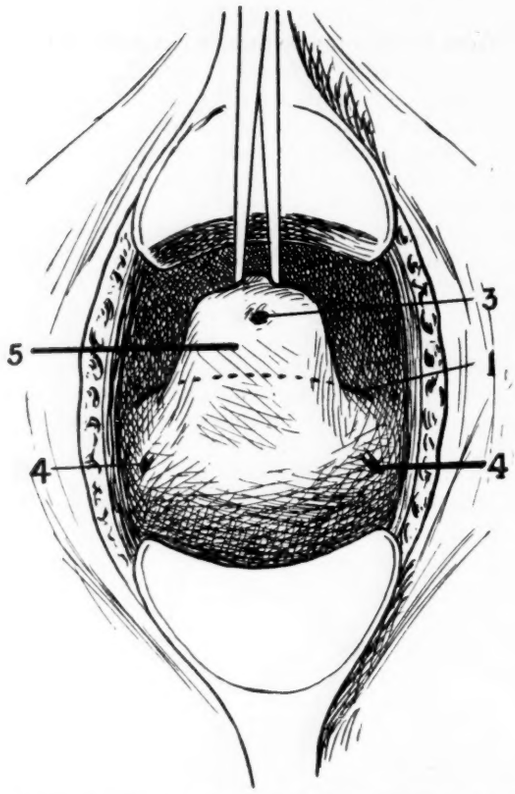

Fig. 9.—Hypertrophy of prostate with protrusion into the bladder of the median lobe carrying along the prostatic urethra; 1, line of incision through vesical mucosa; 3, urethral orifice; 4, 4, ureteral openings; 5, median lobe of prostate. Half-schematic drawing.

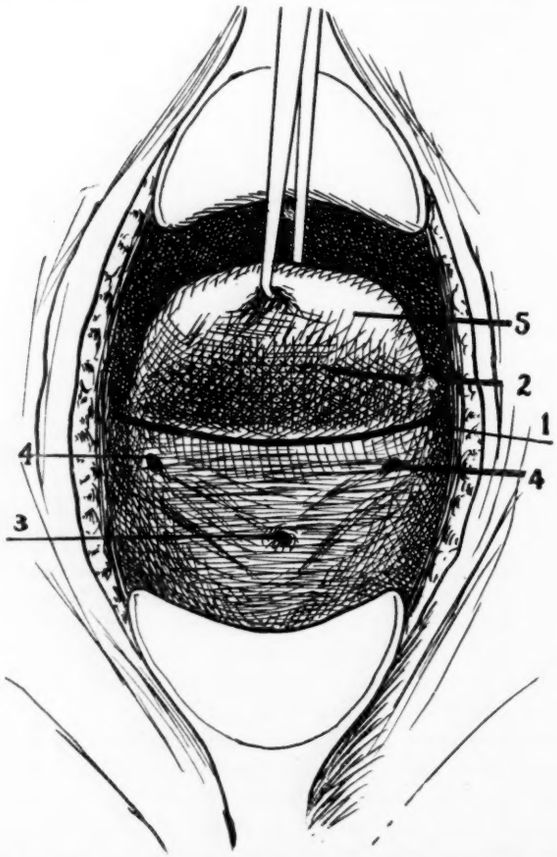

Fig. 10.—Median lobe of the prostate growing into the bladder as a massive tumor; 1, anterior circumference of mucosa incision; 2, posterior circumference of mucosa incision; 3, urethral orifice; 4, 4, ureteral openings; 5, massive tumor of prostate. Half-schematic drawing.

the guidance of the eye and by gradually lifting the tumor out by means of progressing vulsella. On this occasion I wish to mention that the partial or total removal of the prostatic urethra does not in the least interfere with a smooth healing and a perfect final result, provided that the after-treatment be carried out in a manner adapted to this particular incident.

In instances where the hypertrophy is confined mainly to both lateral lobes, so that what is commonly called a "prostatic thor" results, the incision is made over the most prominent contour of one of the lobes, as indicated in Figure 8, and the enucleation is performed in the above described manner.

Another type of prostatic hypertrophy, as illustrated in Figure 9, demonstrates again how important it is to make a correct final diagnosis after the bladder is opened. It will occur in certain cases that the median lobe, by growing into the viscus, carries along the central end of the urethra so that the internal urethral orifice appears at or very near the top of the tumor. Were this incision to be made indiscriminately—for instance, were it to cross the anterior surface of the tumor—severe injury to the urethral end, with all its complications such as hemorrhage or traumatic stricture, could not be avoided. In such instances the mucosa incision should encircle the posterior base of the tumor, as indicated by the dotted line, and the enucleation thus begun will proceed without difficulty and without dangerous lesion to the urethra.

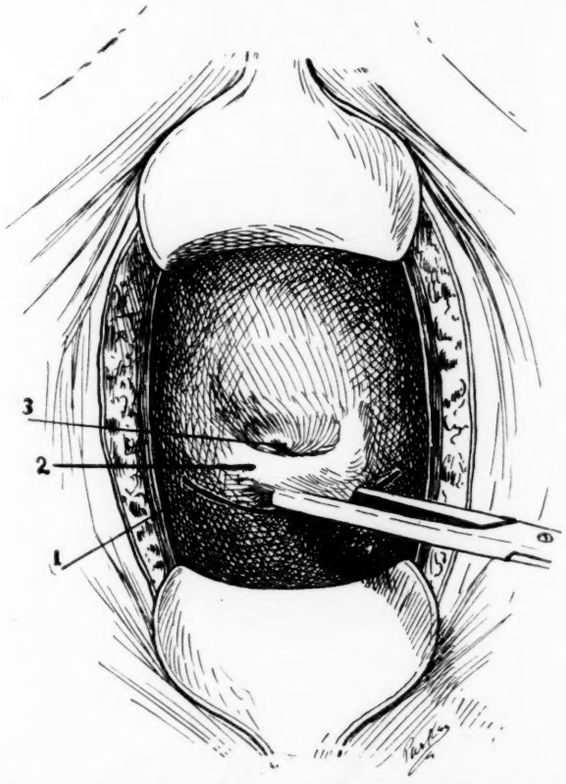

Fig. 11.—Collar-shaped hypertrophied prostate; 1, line of incision through mucosa; 2, collar-shaped protrusion of prostate into the bladder; 3, urethral orifice. Half-schematic drawing.

In other cases the median lobe will grow into the bladder as a massive tumor of such extent that it practically divides that organ into two halves (Fig. 10). It is entirely erroneous to make the incision, as is so often done, over the top of a tumor of this description, for such an incision means only unnecessary hemorrhage

and loss of time. It is impossible to find the right cleavage at the top of such tumors because there is no sheath and because the true capsule of the prostate and the vesical mucosa are thinned out to such an extent in this location that they scarcely can be isolated. In such instances the base of the tumor is encircled by a complete circumcision as indicated in Figure 10. This incision should be made in such a way as not to interfere with the urethral openings which, according to the nature of the case, may lie in front of or behind the tumor. The enucleation is then started from the posterior incision.

In cases of collar-shaped prostate it is important to grasp the prostate with a vulsellum in the proper manner. It is a mistake to apply the forceps to the protruding edge at right angles to the elevation, for if this be done the forceps or vulsellum will tear out and unnecessary injury and hemorrhage will be produced. The vulsellum should be applied at the posterior aspect of the collar, somewhat above its junction with the base of the bladder (Fig. 11). This incision through the mucosa is made parallel to the collar and posteriorly from it, somewhat distant from the insertion of the vulsellum. The enucleation of the prostate is then carried on from behind forward. Thus the mucosa adjacent to the internal urethral orifice rolls off easily from the tumor and any injury to the urethral mouth as well as any tearing of the edges of the vesical mucosa is avoided.

92 State Street.

IGNORANCE OR MALPRACTICE?

FINANCIAL AND CLIMATIC CONDITIONS IN THE TREATMENT OF TUBERCULOSIS

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The object of this communication is to call attention to a phase of the tuberculosis question which is being treated with reprehensible neglect by far too large a percentage of general practitioners. It must be understood that these remarks apply solely to a particular class of patients and to a particular custom of which they are the unfortunate subjects; the word "custom" is used advisedly since the practice does not merit the term "treatment."

The patients are those who have reached an advanced stage of phthisis and in whom the disease is making steady progress, insidious or rapid as the case may be; whose financial means are small and who can not, under the most favorable surroundings, provide themselves with more than the necessities of life or who perhaps are the actual wards of charity.

The custom is that, in the face of all known teachings concerning the disease and in the face of common sense and humanity, physicians will persist in sending this class of patients away from home, family and friends to die in a strange land, by holding out to them the fatuous hope of recovery in a "change of climate."

There is no intention here to disparage the value of a suitable climate in the treatment of pulmonary diseases; but every intelligent physician knows that any climate, however favorable, is valuable only as a subsidiary adjunct to one of the three essentials for the constitutional upbuilding required to check the progress of a pulmonary tuberculosis, these essentials being rest, proper food and fresh air. The Salt River Valley may have the most equable climate and the finest atmosphere in the world—and we who live here firmly believe that it has—yet any physician who advises a patient to sacrifice the first two essentials for the sake of the third is guilty of something more than mere ignorance, for in this day of free knowledge ignorance on this point is sin. Not even 360 days of sunshine each year can equip our climate with any curative value in tuberculosis when the system is deprived of food and the patient of rest or, even when these are granted, when the patient is hopelessly diseased. I am as firm an advocate as any one of this and similar climates as an adjunct to outdoor life (fresh air) when the patient is financially able to provide himself with the other more vital essentials of rest and proper food. But if he has not the means to place himself under the direction of a physician, if he is not able to pay for the necessary care when he is required to rest in bed or otherwise, if he is not able to provide himself with the very substantial food which is always required, then he can hope for absolutely no more improvement in Arizona or any other resort than will come to him at his own home—wherever that may be—with the advantage of the solicitous care of family and friends. The physician who advises him otherwise is guilty either of ignorance or malpractice; and even with all these advantages possible, moribund patients can hope for nothing more here than at home and should be so advised.

It seems inconceivable that physicians can dwell in enlightened communities and remain ignorant of the rudiments of pathology and therapeutics as applied to tuberculous processes when the entire medical world is surcharged with the purpose of educating even the public in these facts. But that such ignorance does exist is only too evident to those of us who practice in communities like this, where are congregated the victims of such professional ignorance, or, if not ignorance, then malpractice, pure, simple and unadulterated. It is deception as cruel and heartless as are the methods of the ubiquitous fakers against whom such a relentless warfare is being waged.

CASE 1.—A boy, aged 16, worked on an elevator in Pittsburg, Pa., until forced by a hemorrhage to stop; his mother being dead, his father a loafer, the boy was dependent on his own efforts. Some business man gave him $150 and on the advice of a prominent physician of Pittsburg he came to Arizona with these instructions: "Live outdoors, stay away from doctors and you will get well." A charitable institution found him and referred the case for admission to St. Luke's Home, to whose staff I belong. The patient was found to be in the advanced stages of pulmonary tuberculosis with consolidation, cavities and visceral involvement. He was not admissible to St. Luke's and was advised to return by the first train to his home town and friends, which he did.

CASE 2.—A young married woman (two months pregnant) with acute miliary tuberculosis was sent to Phoenix from one of the most enlightened cities of southern California; she spent her last dollar for traveling expenses and arrived in Phoenix absolutely destitute, not having means to provide even a night's lodging. Charitable people learned her plight, collected a sum of money and placed her in a tent colony for two weeks, from which she passed first into the County Hospital and then under the care of the Associated Charities, which provided for her until she died. Her physician in California, in whom she had placed implicit confidence and who knew her financial condition, had told her that Arizona was her only hope for recovery.

CASE 3.—A young man was sent here from Oregon, with an advanced tuberculosis of three years' standing which had finally reached that stage of morbidity where Arizona was the "only hope" in the judgment of his physician. The patient learned from the same source that all he had to do was to

secure a bed, a tented roof, camp on the desert "somewhere" and provide his own meals, all at a cost of about $8 per month, and *get well*. Presumably this physician, besides having unbounded faith in the curative value of our climate, also felt a noteworthy confidence in the protection of a benign Providence over his patient, possibly expecting the birds of the air to fetch his food as the ravens did for the prophet.

If these were isolated cases they would be interesting only as examples of man's inhumanity to man; but they are representative of a vast number of cases and the number is constantly on the increase. Phoenix is one of the best-known health resorts in the country for pulmonary tuberculosis, and what is said of Salt River Valley is true of any similar section of the country to which health-seekers are sent indiscriminately. Patients come here and have to be taken from the train by strangers, by representatives of charity or by the civil authorities. The point in the protest is this: that reputable physicians in every section of the country are responsible; they have urged the patient to leave his home where he could at least have died comfortably; have placed him on the train at his home town with no means save his railroad fare and with the delusive advice that he could doubtless find some light work at the destination at which he could make a living and the climate would do the rest. The effort to find that work almost invariably adds the finishing touches to that physician's culpability. Two such cases that fell into my hands during the past year when I was county physician here are noteworthy, since in neither case had the physician who gave such advice even made an examination of the chest.

Each winter the Associated Charities of this city is swamped with such a class of patients and the county hospital is filled with them, and our potter's field is a veritable monument to the guilt of all practitioners who are guilty of such malpractice.

The eastern physician will naturally ask what is to be done for his patients in advanced stages if he can not order a change of climate. Each community must solve this question for itself, and many of them are doing so, but the duty of the physician in charge of such a case is plain. He should carefully acquaint himself with the stage and probable course of the disease, and in prognosticating the outcome he should never lose sight of the social and financial condition of the patient; before sending a patient into a new community he should know how he is to be received there; under what social conditions he is to live; how the requirements as regards rest and food can be and will be carried out; and if all these are not in the highest degree favorable a change of climate—which is a minor consideration—should never be recommended. The doctor should honestly, firmly and courageously meet the conditions as they exist. If these are hopeless he should gently ease his patient's pathway into the grave and not deliberately shirk his duty by shipping the patient across the continent to die away from the solicitous care of friends and loving ministrations of a family.

23 East Adams Street.

Otitis Media Following Varicella.—M. Jacod states that nineteen cases are now on record; in three out of five cases in his own experience there were pre-existing lesions in the nose or pharynx. The ear affection caused by varicella is not so serious as from diphtheria or scarlet fever and rapid recovery is the rule under proper treatment. The geatest care is necessary in the hospital to ward off mixed infection in varicella. His study of the subject is published in the *Revue Hebd. de Laryngologie*, Jan. 16, 1909.

SPELLING AS AN INDEX TO THE PREPARATION OF THE MEDICAL STUDENT

GEORGE DOCK, M.D.
NEW ORLEANS

For many years I have collected certain data bearing on the preliminary education of medical students. From these I have formed some conclusions, and believe that the data, as well as the conclusions, will be of interest not only to medical educators, but to those in other departments of universities, for I do not think that the students whose work I now criticize are the only ones of the kind in their respective classes. I hope that teachers of high schools, and those of lower grades, will also be interested in the following observations, but I hasten to add that I have no intention of suggesting that the results I shall set forth indicate a universal or even widespread condition among the output of secondary schools. My observations have been too scattered to permit such a conclusion, even if I had a desire to draw one. At the same time I think that the examples I submit might profitably lead to a general inquiry, by those in a position to make it, bearing on that point.

My observations have been made chiefly in examination books of medical students in their third year. All had high-school diplomas or their equivalent; a few had college degrees. The proportion of the latter is too small to permit a strict comparison, but suggests the question whether the college degree really indicates sound scholarship, when it is taken after such training as appears in the other candidates. I am prepared for the assertion that one should not expect perfect orthography and English in examination books. I not only realize the certainty of error from haste, preoccupation and confusion, but hope to show how I exclude most of the mistakes of that kind in my present task. I also hasten to meet the assertion as to incorrigible bad spellers—of the errors often looked on by the perpetrators and their admirers as evidences of lofty intellectual quality. There may be such, but I have a conviction that genuine examples of "natural bad spellers" are extremely rare, and that the real cause is almost always poor training. I have seen some of the worst spellers, under the persuasive influence of a "condition," become almost perfect in less than a year. If this can be done in the crowded medical course, it can be done much more easily earlier in school life—if the conviction and willingness to try are only present.

In the case of the people with whom I am now concerned I may add that as the result of what might be called preliminary observations, attention was called, in the beginning of each course, to the importance of English and spelling in the future papers. Moreover, I spent some time in the beginning pointing out the difficulties to be encountered, the value of accurate knowledge of technical terms, the necessity of the dictionary, and other preliminary matters.

EXCUSABLE AND INEXCUSABLE ERRORS

In my criticism I pay no attention to mistakes that can easily be explained by slips of the pen or the mind, such as "apetite," "aposite," confusion of "ei" and "ie," of single or double e and other double letters. In an otherwise good paper I do not note such a mistake as "crysis," after the example of "lysis," "anophales" for "anopheles," "ridig" for "rigid," or "appendicitis" with one p. An isolated phonetic spelling I also overlook, giving the writer credit for being serious. A mild but earnest spelling reformer myself, I look on the writer

of "brest" or "rist" as not necessarily more ignorant or careless but perhaps bolder than I, who leave out the "ue" in "catalog" and the other l in "dulness." If some similar examples occur in the list of unexcusable errors, it should be understood they were associated with what I consider indubitable examples of the latter.

In most of the examples I cite I think it will be admitted that temporary causes are not obviously concerned. Many of the words are technical terms, first used, if not first learned, in the study of medicine. With proper methods of study the student should become familiar with them, so that in an examination he would be not at all in the position of a pupil in a spelling match who encounters a "hard" word like "phthisis" or "Brown-Séquard." Many involve the question of single or double letters, and so may seem excusable, but in those I have selected I do not think this a valid excuse. Finally, the mistakes are not rare or isolated, but occur in some books in every class, and to an extent shown numerically below.

The most flagrant examples are the following:

"Aery" for "area,"
"Aglutinate,"
"Ajacent,"
"Anamil,"
"Antisceptic,"
"Arrises,"
"Arrose,"
"Billiary,"
"Bowals,"
"Bowles,"
"Buldging,"
"Chrisis,"
"Conjenital,"
"Corpussule,"
"Coriza," "cariza,"
"Cracentic," "crescentric," "cresentric,"
"Diehrotic" for "dicrotic," "Dycrotic," "diacrotic,"
"Diarrhoeah,"
"Dispnoea," "dyspanœa,"
"Dissease," "decease" for "disease,"
"Desquimation,"
"Dissapear,"
"Ellicited,"
"Effected" for "affected,"
"Elyptical,"
"Excellerated,"
"Epidurmus,"
"Empyemia" for "empyema,"
"Aevisto" for "estivo,"
"Feal," "fealt,"
"Fassetted,"
"Fourty,"
"Hepitization,"
"Insiduous," "insideous,"
"Immaciation,"
"Inflaimed,"
"Indivigual,"
"Irruption" for "eruption,"
"Iscolation,"
"Epicac,"
"Larangeal," "larnyx,"
"Lacramation,"
"Lanciolatus,"
"Measels,"
"Movvable,"
"Nausia,"
"Omebic,"
"Oposthotonus,"
"Puss,"
"Pilorus,"
"Peticular" for "petechial,"
"Phthysis,"
"Papulary," "papularry" for "papillary,"
"Simptom," "symtom,"
"Stridilous,"
"Suddon,"
"Scarlitinal,"
"Sturnum,"
"Skyograph,"
"Tetnas,"
"Traecheal," "trachial,"
"Tonsalitis,"
"Tempiture," "temprature,"
"Tubercules,"
"Turpid" for "turbid,"
"Umbillicated,"
"Ulseration,"
"Vacanation,"
"Varacella," "vericella,"
"Veriola,"
"Vareloid,"
"Ventillated."

SPELLING OF PROPER NAMES

Not less suggestive are certain errors in the spelling of proper names; and in this connection I must point out that in the most striking examples the names are not difficult to memorize. Moreover, all are encountered in reading that is supposed to be required; they are frequently written on the blackboard during the first two years or the second year. From the results, especially "Hotchins," "Laverent," and the modifications of "Kernig," "Koplik," "Oppler" and "Boas" one might receive the impression that the student had no opportunity to learn the words except by hearing them, and that in an imperfect way.

"Clebs" for "Klebs," "Hotchins" for "Hodgkins," "Lavarent" for "Laveran;" "Koenig," "König," "Konig" for "Kernig," "Lefler," "Loefler" for "Loeffler;" "Oplar," "Opeler," "Upler" for "Oppler;" "Bowas," "Boos" for "Boas;" "Wachselbaum" for "Weichselbaum;" "Pyer," "pyer" for "Peyer." For "Widal": "Widall," "Weidal," "Weidall," "Wedol," "Widol," "Wiedal." For "Koplik": "Koplic," "Koplick," "Coplick," "Caplex," "Koplig," "Kopligk," "Kolpig," "Koeplik," "Köplīk," "Poplik."

Certain words I have used as indices to classes, especially words that must be used in every examination. The most conspicuous of these are "crescentic," misspelled by 8 to 10 per cent. of each class; "measles," misspelled by a proportion almost as large. Among proper names the phonetic "Koplik" has been misspelled by most classes with a striking degree of uniformity—10.5 to 10.8 per cent., but the class of 1908 raised the proportion to 16.6 per cent.

Examples of the collected errors of individuals are interesting, and I give a few:

1. (an A.B.): "Afasia," "effected" for "affected" (many times), "basular," "feberil," "paracite," "parisite," "disapear," "quartian," "irruption" for "eruption," "motal," "sight" for "site."

2. "Bowals," "feal," "eary" for "area," "bace" for "base," "membrain," "pustual," "tungue," "persperation," "crescentrie," "palet" for "palate," "eript" for "crypt," "friabil," "extream," "pilaris," "alveoliar," "cheak."

3. "Cresentic," "dissease," "postular," "vessicle," "broncophony," "fluroscope," "untill," "stoped," "rappid," "controll," "delerium," "medistinal."

In the criticism of the language of examination papers it is easy to go to extremes, but I submit a few examples to show that some mistakes occur that do not reflect credit on the preliminary training of the writers:

"A sequelae of," "quiet constant," "looses" for loses," "dye from poison," "who's health," "aloud to dry," "pulse are rapid," "temperature raises," "gastritis of stomach," "ventricule of stomach," "larangeal scope" for "laryngoscope," "a protozoa," "equitable climate," "lied down," "plumb colored."

THE CAUSE

I think there is a close relation between such mistakes as I have submitted and imperfect technical training in other respects. I never have found it necessary to condition a student for bad spelling or English; the technical matter is always faulty in such cases. Almost without exception, the student who writes "cracentic" or "crescentric" does not understand the real characteristics of a "crescentic" eruption; the one who writes "Koplik" as given above never knows when and where "Koplik's spots" occur, how they look or what they signify. It is not from a love of preciosity that I call attention to the matter, but because it reveals faulty training that must be undesirable in other lines than medicine. As a matter of propriety, however, I think such examples as I have given are unworthy of candidates for a profession still called learned. Physicians who should make such blunders will be made to feel ashamed, or will be looked on with condescension by educated men and women.

The causes of the condition I think are chiefly the following: (1) imperfect training in the precollegiate or preuniversity years; (2) imperfect scrutiny of candidates for admission to the medical school; (3) looseness with reference to scholarly fitness all through the medical course. It is not enough to dismiss the first reason, poor primary and secondary education, as we

often do, as if it were inevitable. I am aware of the complexity and difficulty of the subject, but I venture to say that if all university departments insisted on better preparation, the standards in the lower schools would rapidly be raised.

The need for more careful investigation of entrance credentials is so well known that I shall not discuss it, but mention one of the reasons often given for the existing imperfection, that is, that the public is unwilling to support properly educated graduates, or, in the case of universities supported by states, that the tax-payers wish their children to get through as easily as possible. Risking the accusation of demagogism, I question the accuracy of such replies. Tax-payers and students are never consulted as to standards. Their information on such matters is conveyed chiefly by announcements and catalogues, and at functions like commencements. In the former and at the latter the perfection and superiority of the school are enlarged on with as much eloquence as the writers and speakers can command. Tax-payers and parents, as well as students, who often make great material sacrifices and would willingly make more, not only want the best, but think that they are getting it. But even if they did not want the best there could be no justification for a university to yield to a betrayal of its trust.

The fact that my observations were made in the cases of students who had been in a university two full years shows the need of more care in regard to scholarship even in technical or bread-winning courses. The capable should be stimulated to better work, the incapable removed from the school before there has been an undue loss of time on the part of teachers and fellow students. The present neglect of such efforts is often reflected in an obvious impatience when a fault in preliminary training is pointed out. The study habit, the effort for improvement, has not been acquired. In correcting, as kindly as possible, the annual blunder of pulse as a plural I have been told that the perpetrator "did not come to learn English." One of my colleagues relates an instructive experience. Pronouncing several times without the desired result a word the undergraduate called "larnyx," he finally said that the proper pronunciation was "larynx." "Well, then, larynx, as you call it," was the reply.

The present movement for raising entrance requirements may be expected to change these things, but I think and beg to urge that a more definite and continued effort will be necessary.

124 Baronne Street.

Clinical Notes

MUSCULAR SPASM DUE TO MUSCULAR EXERTION IN A HEATED ATMOSPHERE

TREATMENT BY APOMORPHIN

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During the past six years I have observed this condition frequently in employés of the American Sheet Steel Company, and in one instance in an employé of the West Leechburg Steel Company. In these mills the twenty-four hours are divided into three periods of eight hours each and are known as the morning, day and evening "turns." The "morning turn" begins at 12 midnight and ends at 8 a. m.; the "day turn" begins at 8 a. m. and ends at 4 p. m.; the "evening turn" begins at 4 p. m. and ends at midnight. The men work morning turn one week, day turn the next, and evening turn the next; they, therefore, can not form any regular habits in regard to eating or sleeping. While at work they are constantly employed, during the eight hours, and have but a moment now and then to eat a mouthful. The heat is intense, as large sheets of red hot iron are being passed to and fro continually. The active exercise together with the heat causes a profuse perspiration, so profuse that the men remove their shirts and wring the perspiration from them in a stream as though they had been dipped in water. In order to make up for this great loss of fluid caused by such free perspiration great quantities of water are consumed, sometimes several gallons during the eight-hour period.

There seems to be a special susceptibility to these cramps in certain individuals, as some men will work from ten to twenty years without an attack, while others have them almost every hot day. The condition is rare in the winter months, but during the first warm days of spring, especially if the atmosphere be moist, cases are apt to occur. Chronic alcoholism seems to bear no relation to the attacks; several patients were total abtainers. It is a notorious fact that iron mill workers use alcohol, chiefly beer, to excess.

The two chief factors in the production of the condition are muscular exertion and heat. Men whose work is light, even though subjected to the same temperature as the others, do not develop the symptoms. If for some reason a susceptible man does not get his accustomed rest between "turns" he is likely to develop the condition much earlier in his "turn" than if he had secured the usual amount of rest; in fact, anything that lowers the vitality in a susceptible individual increases the chances of an attack. Humidity of the atmosphere bears some relation to the condition, as attacks are more frequent on sultry days at a temperature much below that required to produce the same effect when the air is dry.

The patient will frequently state that he was not feeling so well as usual when he went to work and that more effort was required to keep up with his duties. He may complain that he was unable to perspire, or that the perspiration, profuse for a time, became more scanty or even ceased to be perceptible.

Gradually involuntary spasmodic contractions of certain groups of muscles occur. The flexors of the fingers as a rule are affected first; these cramps occur every few minutes. In other cases the smaller muscles will remain unaffected and the larger ones of the arms or legs or even those of the abdominal wall develop the condition. Sometimes many muscles or groups of muscles are affected at one and the same time, at other times one muscle after another becomes cramped. If untreated the contraction lasts from one to three minutes, when it gradually relaxes. The beginning of the cramp is usually ushered in by a few feeble twitchings of the muscles about to be affected; these occur long enough before the general spasm for the patient to know that a cramp is coming on. A cool breeze or a sudden jarring of the bed is often sufficient to throw the affected muscles into contraction. There seems to be a predilection for certain groups of muscles in certain individuals; the group or groups of muscles affected in the first attack are likely to be the ones affected in succeeding attacks. As the condition improves the individual cramps are of shorter duration and further apart.

In a well-developed case the cramps may occur every two or three minutes; later they may be five or ten minutes apart, and finally a few faint contractions may occur at intervals of half an hour. The pain during the cramp seems to be severe; I have often had patients tell me that they would rather die than go through another attack. The pupils dilate with each cramp. The pulse as a rule is normal, but in some cases may be slightly accelerated, rarely being over a 100. The skin is often clammy, sometimes dry; when perspiration becomes free the patient improves. The patient seldom vomits, even though the abdominal muscles be involved.

If a leg or an arm is allowed to become flexed by a cramp a large amount of force is required to extend it; not so much force is required to prevent flexion. After an attack the patient feels stiff and sore; but even after a severe attack lasting four or five hours he will be able to return to work at the end of forty-eight hours. The muscles appear to be abnormally strong in these attacks. It is not uncommon to see a patient on his back on the floor and from six to eight of his fellow workmen beside him and putting forth considerable effort to keep his muscles from contracting. I recollect one case in which I volunteered to hold the right arm of a patient during the cramp. I got the arm near the edge of the bed and exerted all my force to keep it in an extended position, using my weight as an aid, but was unable to prevent the flexion. This patient did not weigh more than 140 pounds and was but 19 years old. A sharp slap or two, with the open hand, over the affected muscle will usually produce immediate relaxation. This effect is so well known about the mills and the method is applied so vigorously that the patient is often so pummeled by his associates as to present the evidences of his treatment for several weeks after an attack. In a certain number of cases the patients have finished their "turn" and have been attacked on their way home from work; in still others the cramps do not develop until the patient has reached home, changed his clothing and, to a certain extent, cooled off. It is the rule for these men to sweat freely for several hours after they have completed their work, and as a rule they do not cramp until this free perspiration ceases.

The attacks vary greatly in severity. In some cases only a few muscles are affected; in others a number of groups. An untreated case may last from one to fifteen hours. I have never heard of a case resulting fatally, but have had several patients who were so susceptible that they thought it advisable to change their occupation.

In the treatment of the condition morphin has been used probably to a greater extent than any other drug. To a certain extent it relieves the pain, but has little or no effect in cutting short the attack. I have given as many as three quarter-grain doses, hypodermically, within two hours. Even with this dosage the symptoms continued for several hours. Hot packs are more effective. Some mills are provided with an emergency room where hot water and woolen blankets are provided, and when a patient develops cramps he is taken immediately to this room, stripped and wrapped in a hot blanket. These are changed frequently and usually, after an interval varying from fifteen minutes to half an hour, the cramps become less severe. In all attacks an effort is made to keep the part affected in extension, as in this position the pain is less severe. If the muscles of the hands and feet are the only ones affected, the affected part can be placed in hot water and kept there for several hours. If this treatment is discontinued too soon the cramps are likely to return.

Apomorphin in doses varying from 1/12 to 1/20 grain will produce immediate relaxation. As a rule the emetic action is prompt and is followed by marked prostration. In the first cases treated with this drug the larger dose was used, but later I found that the smaller dose would entirely control the cramps, and in some instances did not produce any marked emetic effect. When the prostration is marked it usually lasts from five to eight hours. As has been mentioned before, a cramp in an individual muscle may be made to relax by a sharp slap over the affected muscle, but the relief is only temporary. The best treatment is probably to treat the milder cases with hot water or hot packs on account of the prostration following the use of apomorphin, but in all severe cases apomorphin should be given and followed by strychnin, 1/30 grain every four hours.

I have treated between fifty and sixty attacks of these cramps in twenty-four or twenty-five individuals. Of these one patient has been observed in ten different attacks extending over a period of three years. A number of men have been treated in but one attack. A brief account of a few of these cases will be given:

CASE 1.—E. K., aged 18, single, American, worked a turn one very sultry morning. He had probably walked about a quarter of a mile on the way home from work when cramps began in the legs. He was carried into a near-by saloon. This occurred about 8:30 o'clock. I saw him at 9 o'clock, and found him lying on the floor with six or eight of his fellow workmen holding his arms and legs in extension. When the cramps came on, which was every two or three minutes, they would strike the offending muscles with their fists, to produce relaxation. Several blankets and coats were wrapped around the patient. I gave him ¼ grain morphin hypodermically, which somewhat relieved the pain. At the end of half an hour the cramps had not diminished in frequency, and I repeated the dose of morphin. At the end of two hours the cramps had diminished both in frequency and severity, and the patient was taken home on a stretcher. He was put to bed and warm blankets applied. About 2 p. m. the cramps had entirely disappeared. I saw the man the next day and found him feeling well; there was a little soreness in the muscles but not more than one would expect from the treatment of his fellow workmen. He went to work the next day, thus losing but one turn.

I attended this patient in nine subsequent attacks covering a period of three years. In regard to the muscles affected, the attacks were very similar to the first. In one attack I gave him ¼ grain morphin and followed it by the administration of chloroform. I kept the chloroform up for twenty minutes. When he recovered from the anesthetic the cramps had disappeared. In another attack, which came on about 6 p. m., I gave the usual dose of morphin and followed it with about 3 ounces of whisky every hour for four doses. The cramps gradually disappeared and were completely gone by midnight. The patient became somewhat intoxicated. In the last attack in which I had the opportunity to treat him I gave him 1/16 grain of apomorphin; vomiting occurred in ninety seconds. The cramps ceased immediately. His pulse varied in the different attacks, but was usually between 80 and 90 before the treatment; sometimes it went up to 120 near the end of the attack.

CASE 2.—J. F. C., aged 42, single, American, has worked in an iron mill the greater part of the time for the past twenty years. He is not addicted to the use of alcohol or tobacco. He served as a soldier during the late Spanish-American war. There is no evidence or history of lues. He was working evening turn at the time of this attack. He had been at work about two hours when he noticed cramps in the muscles of his fingers. He worked about ten minutes longer when cramps developed in the muscles of his legs and arms. He fell to the

floor and his fellow workmen carried him to the emergency room, where I saw him about fifteen minutes later. Pulse was 84, skin moist and clammy. The smaller as well as the larger groups of muscles of both upper and lower extremities were affected. The various muscles were not affected simultaneously but at different times so that the patient had no interval during which he was entirely free from the cramp. He continually cried out with pain and begged me to give him relief; 1/12 grain apomorphin was given hypodermically; the cramps ceased immediately. In about two minutes he began to vomit and to sweat profusely. In two hours he was taken home in a buggy and was able to return to work three days later.

This man gives a history of having had attacks of greater or less severity at intervals during the past fifteen years. All attacks, except the one here described, lasted from two to six hours.

CASE 3.—J. W., aged 44, married, American, has been a mill worker for fourteen years. He uses alcohol to excess at times. He has had four or five previous attacks of cramp. He completed the usual eight-hour turn and walked home, a distance of about one-half mile, when the cramps came on in the large muscles of the arms, legs and trunk. I arrived a few minutes later and found the man on the floor. He was a large, muscular man, weighing over 200 pounds, and when the cramps came on they were something terrific. I gave him 1/12 grain of apomorphin, which produced immediate relaxation followed by vomiting. He was able to return to work the next day, thus not losing any time.

CASE 4.—C. S., aged 21, single, American, has worked in mill for past five years. He never had cramps before. He takes an occasional glass of beer. He went to work at 4 p. m. on a hot, sultry evening. About 7:30 he noticed an occasional cramp in the muscles of the arms; these gradually became worse until 8 o'clock, when he had to stop work. A few minutes later they were so severe that he was taken to the emergency room and hot blankets applied. I saw him about 9 o'clock, when he was having cramps every three or four minutes. The flexors of the arms and legs were the only muscles affected. He received 1/20 grain apomorphin. No more cramps developed. In three or four minutes he broke out in a profuse perspiration. No vomiting occurred. An hour later he was able to walk home and returned to work the next evening.

CASE 5.—G. B., aged 32, single, Hungarian, is an employé of the West Leechburg Steel Company. He has been in this country about nine months. He had worked his usual period of ten hours, returned to his boarding house, and finished eating his supper before very severe cramps in muscles of legs, arms and abdomen developed. He screamed each time a spasm developed. The pain seemed to be most severe at the beginning of the cramp, and not more than a minute intervened between the individual cramps. I gave him 1/12 grain of apomorphin. The cramps ceased, but there was great prostration for five or six hours. This man went to work the next day. This is the only case that I have observed in a person of foreign birth, although there are many foreigners working under the same conditions that seem sufficient to produce the muscular cramp in a native-born American.

DARNING-NEEDLE EXTRACTED FROM THE EPIGASTRIUM OF AN INFANT

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Patient.—Baby H., a well-nourished, breast-fed child, 10 weeks old, had always been healthy and good-natured until about Feb. 10, 1909. At this date the mother noticed a slight change in the baby's disposition; also that some positions caused discomfort or pain. No cause was apparent; the bodily functions continued normal. On February 17 I was called.

Examination.—Over the epigastrium was a localized erythema and a slight prominence an inch above and to the left of the navel. A hard, pointed object, apparently projecting from the stomach, was perceptible on palpation, and a diagnosis was made of the presence of a foreign body—a pin or a needle.

Operation.—A slight skin incision over the prominence revealed the point of a needle, which was easily extracted with the forceps. It was a darning-needle, one and three-quarters of an inch long.

The swallowing of pins, needles, etc., by babies is not rare, but such a case in an infant so young is unprecedented in my experience. I can account for it only by supposing that the needle had been stuck in the mother's dress and had slipped into the baby's mouth during nursing.

A FIBROID TUMOR OF THE UTERUS

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At this time, when there is a discussion as to the advisability of removing the "symptomless fibroid," it may not be inopportune to report the following case:

History.—The patient, Miss D. M., aged 46, came under my care at the St. Francis Hospital on Dec. 28, 1907. Her menstruation had been established at seventeen and had been regular every four weeks with a scanty flow of one or two days' duration. She had some pain the day before each menstrual period. On Dec. 16, 1907, she was taken with pain in the lower abdomen and with difficult and frequent urination. She had a temperature of 102, pulse 100. She complained of an intense pelvic soreness. This was the first sickness she had had for eighteen years. Her menstrual period began the next day, December 17, and lasted one day with a very scanty flow. On December 18 the soreness began to subside and on December 20 the temperature became normal.

Examination.—This revealed a hard, symmetrical fixed mass in the lower central abdomen, and a diagnosis was made of fibroid tumor of the uterus. The patient had not been aware of any enlargement in the lower abdomen.

First Operation.—On Jan. 2, 1908, a non-continuous longitudinal median incision was made above the symphysis and the omentum and intestines were seen to be closely adherent to the tumor mass. When the adhesions were separated and the tumor delivered through the incision it was seen to be a large fibroid of the uterus which had became so tightly twisted on its pedicle that the circulation was cut off and the tumor was of the greenish-yellow color of gangrene. The pedicle was clamped and the tumor removed. The uterus contained a large number of smaller fibroids, so a supravaginal hysterectomy was done. All raw surfaces in the pelvis were covered with peritoneum. There were so many abraded places on the intestines due to the adhesions to the tumor that no attempt was made to do anything to them. The patient's recovery was uneventful.

In June, 1908, she had an attack which resembled obstruction of the bowels, but the family succeeded in relieving it. On Oct. 29, 1908, her bowels became obstructed again. On October 30 she began to vomit. On October 31 she began to vomit fecal matter and was placed on the train and brought to the St. Francis Hospital.

Second Operation.—An incision was made around the old scar. There were no adhesions to the floor of the pelvis. Several coils of small intestine were found adhered to each other. The cecum had slipped through a loop formed by two coils of small intestine which were densely adhered together. The cecum was greatly distended because of the pressure at its distal portion by the tight loop, and it in turn pressed tightly against one of the limbs of the loop. The small intestine above this compressed limb was greatly distended and had a few small dark-colored spots on its surface. The adhesions were separated and the cecum released. As the obstruction had been relieved it was thought that the intestine might regain its

vitality. The patient was put to bed, and two hours afterward her pulse became very rapid, she grew cold, and died six hours after the operation.

It was very evident that the abraded surfaces left on the intestine by the separation of the adhesions to the gangrenous fibroid had become adherent to each other and thus formed the adventitious opening through which the cecum had slipped.

Is it assuming too much if one concludes that if the fibroid had been discovered and removed before it became twisted on its pedicle the patient might be alive to-day?

402 Observatory Building.

ATROPIN POISONING IN A CASE OF INTERSTITIAL KERATITIS

H. FREUDENBERGER, M.D.
GRAND JUNCTION, COLO.

In the literature to which I have access it is stated that poisonous symptoms rarely occur with the instillation of 1 per cent. solution of atropin sulphate.

Patient.—A boy, aged 8, blond, fairly well developed and nourished, had been under treatment for interstitial keratitis since November, 1908. This was complicated with a posterior synechia in the left eye. Treatment consisted of instillations of one drop of a 1 per cent. solution of atropin sulphate five times daily with the administration of biniodid of mercury and potassium iodid internally. Six weeks ago the instillations were reduced to one drop three times daily. The general health and sight were improving.

Poisoning.—On Feb. 25, 1909, I was called at noon and told that the boy was acting very queerly. It was also stated that there was muscular incoordination of both lower extremities and that articulation was difficult and incoherent. I saw him within an hour after these symptoms began. Rectal temperature was 98.2 F., pulse 104 and respirations 22. The pupils were widely dilated from the instillations of atropin, the face was flushed, the lips dry, the tongue moist, the throat dry, but normal in color, the mucous membrane of the nose dry, no nausea or vomiting. There was considerable mental excitement with illusions, delusions and hallucinations. The patient seemed to become momentarily rational at times. During these rational moments he would protrude his tongue when asked and also stated that nothing pained him. Reflexes were exaggerated. The patient refused to take anything to drink. A tepid sponge bath was ordered and an enema given. The patient passed a small unformed stool and about a half pint of amber-colored urine which contained no albumin. The diagnosis of atropin poisoning was made and all medication discontinued. Six hours later the only change noticed was decidedly clearer articulation. The patient had passed a large quantity of urine during this time. Chloral and bromid were administered and about 10 p. m. the patient passed off into a normal sleep, not awakening until 7 a. m. the next morning, perfectly rational, with a good appetite and anxious to be up and at play.

DYSPNEA AND URTICARIA FOLLOWING INJECTION OF ANTITOXIN IN DIPHTHERIA

J. H. BACON, M.D., AND WRIGHT C. WILLIAMS, M.D.
PEORIA, ILL.

Patient.—On Sept. 20, 1908, a young man of 28 presented himself complaining of a sore throat and giving the history of exposure to diphtheria three days previously. An examination of the throat showed a typical membrane on the right tonsil, a culture from which gave the Klebs-Loeffler bacillus. Externally the throat was tender to pressure and the cervical lymph glands were enlarged. The patient was nervous; temperature 100 F. and pulse 95. The examination was otherwise negative.

Reaction from Antitoxin.—At 11:30 a. m. 2000 units of antitoxin were injected in the back with no especial discomfort to the patient. In about ten minutes the patient became restless, the face cyanotic and the respirations difficult. Gradually the respiratory distress became marked, the patient lying in a slightly raised position, with head extended, face cyanotic, expression agonized, nostrils dilated, the body limp and covered with cold sweat—the picture of suffocation. The pulse was rapid and weak, 120 a minute; the respirations were noisy, 30 to the minute. A hypodermic injection of morphin, gr. 1/4, and atropin, gr. 1/150, was administered. A cold towel was applied to the head, the extremities were rubbed and the patient fanned. After twenty minutes the urgent dyspnea gradually left and a fine general urticarial rash was noticed. This rash was white and raised, itched only slightly and persisted for four hours. When the patient could be moved he was taken home and put to bed.

Treatment for Reaction.—As it was feared that another injection might be necessary, the dry antitoxin was telegraphed for, and calcium lactate given by mouth every two hours in 5-grain doses. A gargle of hydrogen peroxid was ordered and strychnin, gr. 1/40, was given every four hours. A few drops of antitoxin were dropped into the nostrils every hour, in the hope that some might be absorbed and retained. At 11 p. m. the patient experienced a slight attack of dyspnea, which was readily controlled by morphin and atropin by mouth. In the morning the membrane had increased, covering parts of both tonsils, and the patient's general condition was not so good. After waiting several hours, the dry antitoxin not arriving and the patient's condition growing worse, we thought best to renew the injection in the hope that the calcium lactate would control the unfavorable action of the antitoxin. A hypodermic injection of morphin, gr. 1/8, and atropin, gr. 1/150, was administered and a few minutes later, at 3 p. m., the injection of antitoxin was begun. In the next twenty minutes 4000 units of antitoxin was given; then the patient again became restless and cyanotic, the difficulty of breathing reappearing as on the previous day, though with hardly the same severity. A second hypodermic injection of morphin, gr. 1/8, with strychnin, gr. 1/40, was administered. The urgent dyspnea lasted about fifteen minutes, and as the patient's breathing became easier the urticaria returned. This time also it was general and white but the wheals were larger, persisting for twenty-four hours and the itching was marked. The next morning the throat was nearly clear. The recovery was complete and uneventful. At no time in the disease did the temperature go above 101.5 F. and the pulse ranged between 90 and 110 except in the dyspneic attacks, when it was about 120.

History.—Later a history was obtained of attacks resembling hay fever when the patient was around horses, especially when they were sweating. These attacks began by itching of the eyelids, and a feeling of rawness in the nose, and were followed by a coryza, which persisted for about two hours. The attacks were so oppressive that the patient always avoided a livery stable. During previous years he had had several asthmatic attacks not at all associated with hay fever. Since these injections of antitoxin the attacks of asthma have disappeared. The patient had received hypodermic injections of morphin previously, so that was not the cause of the urticaria. The association of dyspnea from the use of horse serum and the attacks of something resembling hay fever from the odor of horses is at least an interesting coincidence, if not showing a causal relationship.

One might be censured for administering the second dose of antitoxin when the first was so fraught with danger; but at that time it was regarded as the less of the two dangers. So far as an opinion can be formed from one case, it seems that the calcium lactate lessened the bad effects of the serum, which were lighter and of less duration after its administration, although twice as much of the serum was given. Sixty grams were administered between attacks.

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THE RESPIRATORY RATIO: A PRELIMINARY NOTE

C. M. COOPER, M.B.
SAN FRANCISCO

The respiratory ratio which I wish to describe is obtained as follows: The patient is told to take a deep breath and to hold it as long as he can. He is further instructed to raise his hand when he feels that he must expire. Some little time (five minutes) is then spent in the ordinary examination; then the patient is told to expire fully and not to breathe in till he is compelled to do so, when he again must raise his hand. The time from the beginning of either of these phases of respiration to the time of raising the hand is noted and the ratio thus obtained.

The period during which the breath has been held in full inspiration by healthy individuals has varied from 40 to 70 seconds. The period during which the breath has been held in full expiration in the same individuals has varied from 20 to 35 seconds. The first term of the respiratory ratio then varies from 40 to 70 and the second from 20 to 35.

It seemed likely that we might expect departures from the normal in different directions according to the lesion present.

In individuals with a narrowing of the field of cardiac response due to cardiovascular lesions we might expect a shortening of each period, the ratio, however, being more or less maintained. This has been borne out in clinic patients with valvular lesions, myocardial insufficiency and aneurisms whom I have investigated, the time ratio reading about 25:15.

A paradoxical respiratory time ratio would seem to be likely to occur in the following classes of patients:

1. In patients with paralysis or paresis of the muscles of inspiration, since the maintenance of the inspiratory position is a muscular act.

2. In patients in whom pathologic lung conditions have led to changes which increase during sustained inspiration the resistance to the pulmonary circulation beyond the limit of response of the right ventricle, or which lead to a considerable reduction of the quantity of fresh air taken in during the inspiratory act. Two asthmatics who came to the clinic during the period of almost complete abeyance of the attacks had ratios 15:25 and 20:35, respectively, both thus exhibiting considerable diminution in the period of sustained inspiration, while the period of sustained expiration was normal. One patient with a fibroid phthisis and with a rapidly-acting, partially-exhausted but not dilated heart exhibited a ratio 5:7, etc.

In three normal individuals who had taken lung gymnastics the ratios were, respectively, 90:25, 75:25 and 75:25, these ratios seeming to suggest that the increased period of sustained inspiration was probably due solely to an increased chest expansion leading to an increased air intake.

3. In patients with mediastinal and pericardial adhesions which prevent the concomitant movement of lung root and heart. One such patient exhibited a ratio of 9:25.

Naturally many variations will occur, since complicated lesions are frequently present, and naturally such a ratio should vary with the decline and improvement of the patient.

Therapeutics

SCABIES

While the diagnosis of "itch" is considered perfectly easy to make, and, having been made, the treatment is likewise considered simple and always the same, it is well pointed out by Dr. Douglas M. Montgomery, San Francisco (*California State Journal of Medicine*, February, 1909) that the diagnosis is not so simple, and that the treatment should not always be the same, and that with any treatment the itch is often difficult to eradicate.

If the burrows and the itch mite are found, of course, the diagnosis is made, but there are many cases of itch in which the burrows are difficult of discovery, and the itch mite is elusive and evades the dermal scrapings for microscopic examination. Even the itching varies with different individuals, some few being very tolerant of the irritation and thus becoming conveyors and transmitters of the disease without their personal knowledge.

Various types of skin irritation develop during the various stages of scabitic inflammation. There may be papules, vesicles, pustules and crusts. The severest itching is generally present at night, and especially on first retiring.

"The burrow or run is made by the female in the lower layers of the cornified epithelium of the skin." These burrows, or "roughened, curved furrows," occur most frequently on the anterior surfaces of the wrists and between the fingers. Sometimes these burrows are simulated by dirt-filled lines in the epidermis. The diagnosis can generally then be made by shaving off the suspected epidermis with a scalpel, then laying the epithelial slice on a slide, adding a drop of glycerin, placing a cover glass over it and examining with a low power lens. If the eggs of the itch mite, or the mite itself, are found, the diagnosis is established.

When the fingers and hands do not show signs of this infection, signs may be discovered on the elbow tips, and on the nipples in women. When there is a generalization of the disease, characteristic signs and eruptions will be seen on the hands, wrists, axillary folds, abdomen, nates, in the popliteal spaces, and more or less on the genitals.

It should not be forgotten that the itch may be present in a mixed infection; in other words, there is more or less eczema from the irritations and scratchings, there may be nodular and suppurative processes, enlarged glands and syphilitic eruptions.

The disease does not seem to be acquired in ordinary social life, but is caught mostly in bed, from individual to individual, or by sleeping in an infected bed.

Montgomery believes that the treatment generally advised for scabies is too rigorous, and declares that many of the prescriptions ordered "are more of a cure for lassitude than for the itch." The parasiticides most used in eradicating the itch are sulphur, betanaphthol, balsam of Peru, cresol and styrax.

The patient should be instructed to take a hot bath, using plenty of soap and thoroughly cleansing, perhaps with a soft nail brush, the parts where the parasites are mostly located. He should then anoint all parts of his body with the sulphur ointment prescribed, and should especially rub it into the parts most affected. This same treatment should be carried out on nine successive nights, says Montgomery. He advises during the whole

course of treatment that the patient "should wear a full suit of woolen underclothing, so that the ointment, by getting into the underwear, may be returned to the skin and rubbed in with every movement of the body." Therefore he should wear the same undershirt and drawers during the whole nine days and nights of treatment, only taking them off to rub in the ointment. It would seem as though the sort of clothing would depend much on the time of year and the patient. It is frequently better to use old cotton underwear during this treatment and to change it several times during the nine days.

The official sulphur ointment contains 15 per cent. of sulphur, and is stronger than should generally be used, on account of the irritation and actual dermatitis that it may cause. Either one of the following is preferable:

℞.	gm. or c.c.		
Sulphuris loti	10	or	ʒiiss
Adipis benzoinati, ad	100		ʒiii

M. et Sig.: Use externally, as directed.

℞.	gm.		
Unguenti sulphuris	50	or	
Adipis benzoinati	50		āā, ʒiss

M. et Sig.: Use externally, as directed.

In mild cases of this disease thorough bathing and cleansing of the affected parts with strong alkaline soap, rubbing and dusting the rest of the body with washed sulphur, and then dusting the sheets of the bed with this dry sulphur, may cause an eradication of the disease without the necessity, discomfort and nastiness of ointments.

Very popular in treatment of the itch to-day is the balsam of Peru. It may be used alone or combined with sulphur. Montgomery makes use of it in the following combination:

℞.	gm.	
Sulphuris precipitati	12	or
Balsami Peruviani	12	āā, ʒiii
Adipis lanæ hydrosi	50	
Petrolati, ad	100	āā, ʒiss

M. et Sig.: Use externally, as directed.

In infants, or when there is considerable dermatitis, Montgomery uses the balsam alone, as follows:

℞.	gm.	
Balsami Peruviani	25	
Adipis lanæ hydrosi	25	or
Petrolati	25	āā, ʒi

M. et Sig.: Use externally, as directed.

Although balsam of Peru may be painted all over the skin in full strength, it should not be forgotten that it may cause serious dermatitis. When the balsam of Peru is used alone, only a small amount is required for each application, and 10. grams (2½ drams) is sufficient to rub over the entire body. "Such an application should be made twice a day for two succeeding days, and the patient should neither bathe nor change his underclothing for four or five more days, after which a bath is taken." The undergarments used with the balsam of Peru treatment must be thrown away, as they can not be cleansed.

If it is deemed best not to use sulphur or balsam of Peru, styrax may be used as follows:

℞.	gm. or c.c.		
Styracis	25		ʒi
Alcoholis	10	or	fl.ʒss
Olei olivæ	65		fl.ʒiiss

M. et Sig.: Use externally, as directed.

Or styrax may be combined with balsam of Peru as follows:

℞.	gm. or c.c.		
Styracis	80		ʒiiss
Balsami Peruviani	20	or	ʒv
Alcoholis	15		
Glycerini	15		āā, fl.ʒss

M. et Sig.: Use externally, as directed.

Also valuable as parasiticides in scabies are betanaphthol and cresol. The former may be used as follows:

℞.	gm.		
Betanaphtholis	7	or	ʒiss
Petrolati	100		ʒiii

M. et Sig.: Use externally, as directed.

This ointment may be used in the same manner as are the sulphur applications.

Cresol may be used as follows:

℞.	c.c.		
Liquoris cresolis compositi	50	or	
Olei olivæ, ad	100		āā, fl.ʒii

M. et Sig.: Rub into the affected parts morning and evening.

Montgomery finds dermatitis or severe irritation is less likely to be caused when the medicament used is varied during the progress of the treatment. Therefore he often uses a sulphur and balsam of Peru ointment for three days, then a betanaphthol ointment for three days, and then, perhaps, a cresol treatment for the remainder of the time.

If dermatitis is caused he recommends the application of the following paste, viz.:

℞.	gm. or c.c.		
Acidi salicylici	1 50		gr. xx
Amyli	15	or	
Zinci oxidi	15		āā, ʒss
Glycerini	30		fl.ʒi

M. et Sig.: Apply twice a day.

As to general disinfection, Montgomery finds that boiling the patient's underclothing is sufficient. He does not believe it is necessary to disinfect the outer garments, with the exception of the gloves. These he advises should all be either burned, or, if to be used again, thoroughly dusted with powdered sulphur.

BONE TUBERCULOSIS

Dr. W. A. Tatchell (*British Med. Jour.*, Feb. 13, 1909), writing from Hankow, Central China, states that tuberculosis of the joints, bones, glands and skin is one of the most common diseases which he has to treat, and says that he has had most splendid results with the application of iodin in tuberculosis of the bones.

He operates on a tuberculous bone as usual, then he thoroughly swabs the cavity with the iodin liniment of the British Pharmacopeia. The application does not cause pain, neither does it destroy tissues as does pure carbolic acid, and granulations do not become excessive. At the first application he leaves a thin piece of gauze in the sinus, but subsequently uses no plugs or strips for drainage, as he believes they have often been responsible for chronic sinuses.

Internally he administers the following:

℞.	gm. or c.c.		
Potassii iodidi	6		3ii
Syrupi ferri iodidi	75	or	fl.ʒiii
Syrupi, ad	100		ad, fl.ʒiv

M. et Sig.: A teaspoonful, in water, three times a day, after meals (best taken through a glass tube).

Linimentum iodidi of the British Pharmacopeia is made as follows:

Iodin	1¼ ounces
Iodid of potassium	½ ounce
Glycerin	¼ ounce
Rectified spirit (alcohol)	10 fluidounces

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THE TUBERCULOSIS BACILLUS AND ENVIRONMENT

Probably the most interesting declaration made at the International Congress on Tuberculosis, held in Washington, D. C., last fall, was that of the Russian surgeon general that the body of every adult over 30, even though dead from some other disease, when carefully examined, shows that at some time during life tubercle bacilli have been present. The opportunities afforded for investigation of this subject in the Russian army are very complete, and, as all sorts of men are in the army, those raised in the country as well as in the city, and all classes of the population, since army service is compulsory, the declaration would seem to be founded on indubitable evidence. Of course this statement is not new: Investigations made in Vienna over twenty years ago showed that at least three-fourths of all the bodies of individuals dead from other diseases than tuberculosis, presented evidence that the tubercle bacillus had been at some time active in the tissues. Corresponding investigations elsewhere showed similar conditions. As a consequence of these investigations, and of the older tradition of the ubiquity of tuberculosis, we have the well-known Viennese expression: *"Wir sind Alle am Ende ein bischen tuberkulös."* "We are all of us after all a little tuberculous." Formerly this seemed an exaggeration, but recently it has come to be looked on as a literal truth. The bacillus of tuberculosis succeeds in gaining implantation in the tissues of all of us at some time during the first half of life, but seven individuals out of eight are able to resist its invasion and so do not develop tuberculosis.

We have here then an important problem as to the relation of the bacillus to the conditions for its successful growth. It has long been recognized that while the bacillus of any infectious disease is the direct cause of that disease, the micro-organism will not succeed in producing the disease unless there is a predisposition on the part of the individual or at least a lack of immunity, that is, of resistive vitality. It is rather interesting to study the reasons for the power of resistance of seven-eighths of mankind. Tuberculosis is a city disease and we now know that inhalation of any irritant particles has more to do with it than almost anything else. In certain polishing trades involving the inhalation of a great deal of dust the death rate from tuberculosis is so high that it is impossible to provide a death-benefit fund in the trade, since the average term of life is so short.

There are other conditions that just as obviously predispose the individual to such physical conditions as lower the resistive vitality against tuberculosis. Most of the mill trades in which many people are associated in a single room, especially if the occupation is dusty, have the same effect. Wherever people work together closely associated with one another, crowded so that the emanations from their bodies get into the air and are not removed by ventilation, this same lowering of immunity is produced. Any of these people who acquire tuberculosis fail to resist it. For them their environment is much more important than the contagion itself, and apparently this is true for most cases of tuberculosis. It is not the natural immunity that is at fault when the disease makes rapid progress, but it is that the environment is so unfavorable that Nature is not able to exert the resistive vitality that she normally possesses.

The same thing happens if there is a constant renewal of the contagious material finding its way into the body. The statistics of Paris serve to show that laundresses who handle the clothing of the general population, containing a certain proportion of tuberculous patients, are more likely to die from tuberculosis than are other women of the same class who are not subjected to this frequent contact with tuberculous material. In London it has been noted that scrub-women, especially in large buildings, who through sputum are likely to be brought in contact often with tubercle bacilli, suffer from the disease much more than other individuals in the same station in life who live and are fed in about the same way.

It is evident, then, that the problem of the reduction of the mortality from tuberculosis is to an even greater extent a question of improving the environment in which individuals live than of reducing the contagion to which they are subjected. The bacillus is important, but not nearly so important as the predisposition and unfavorable conditions of life. This is because our natural immunity is not lessened by an unfortunate environment but is helped by the conditions in which we live, and it is only by appreciating this fact, and by laboring also to prevent the maintenance of such unfavorable conditions, that the crusade against tuberculosis will be successful.

THE ROLE OF LIPOIDS IN IMMUNIZATION

It is a long-recognized fact that the sodium chlorid solutions ordinarily used in experimental study of problems in immunity afford only an approximation to the conditions actually present in the living organism. In view of this fact, Pick and Schwarz[1] recently carried out some experiments under conditions different from

1. Biochem. Ztschr., 1909, 15, p. 453.

the ordinary, which not only give interesting results, but are of great value in furnishing suggestions for future work. The fluids of the body, in addition to their content of inorganic salts, also contain to a considerable extent so-called lipoids, that is, substances having the general property of being soluble in the organic fat solvents. It was the rôle of these lipoids in immune processes that was investigated; the lipoids used were lecithin and alcoholic extracts of various organs and of blood constituents.

It was found that the use of a lecithin emulsion in place of sodium chlorid emulsion in the preparation of suspensions of typhoid bacilli for the purposes of inoculation produced a relatively highly agglutinative serum in a short time, even though only small amounts were injected. Further, precipitation of the organisms in such a suspension by typhoid serum occurred much more quickly and perceptibly than is the case in the agglutination reaction as ordinarily performed. Other lipoids behaved similarly to lecithin in these respects, the blood lipoids somewhat surpassing those from the organs in their effects.

While agglutination reactions were obtained in any particular instance for all the typhoid-lipoid suspensions, in each case the greatest effect was obtained with the homologous suspension. That the effect was not, even in part, owing to the presence of an antibody for the lipoid alone was shown by the peculiar fact that the serum of an animal immunized with serum lipoid alone gave a reaction with that lipoid only in the absence of typhoid bacilli.

This work has some immediate practical value because of the greater sensitiveness of the agglutination reaction as modified by Pick and Schwarz; indeed, they state that actual clinical experiment has demonstrated its sensitiveness even rather early in the disease. But aside from this, the evidence that greater response to immunization may be expected when material more closely adapted to the living organism is used may possibly lead to greater accuracy in fields already gone over by the usual methods, as well as open up avenues of investigation previously considered closed.

PREHISTORIC PATHOLOGY

When we begin to contemplate Egyptian history our ideas as to what constitutes true antiquity receive a sudden shock, for ancient Rome is to predynastic Egypt as Chicago is to the Acropolis of Athens, and a perusal of the works and monuments of the physicians of early Egyptian and Assyrian times causes Hippocrates to seem like one of our most recent graduates. Indeed, so overwhelmed is our vanity at finding that at so early a period in history there existed some really accurate practical knowledge of pathology and therapeutics that we have been perhaps too willing to render homage to antiquity, and have credited the early Egyptians with even more skill than they actually possessed. For example, it is a current belief that the Egyptians were practiced in filling teeth with gold; yet Comrie,[1] in an interesting lecture on "Medicine Among the Assyrians and Egyptians in 1500 B. C.," states that he has been unable to obtain any confirmation of this belief in spite of considerable search and inquiry. Likewise, the idea that amputations were performed by Egyptian surgeons seems to be incorrect, and indeed the very idea of the mutilation of the body was so foreign to their religious belief that this practice would seem to have been impossible.

On the other hand, they attacked tumors boldy with knife and cautery and seem to have distinguished between the various forms of tumors to no inconsiderable extent. Accounts exist in old papyri which depict clearly enough to permit of recognition certain of the diseases that were met with at that time. Several forms of intestinal parasites were known, as well as appropriate vermifuges, while the apparent prevalence of a pernicious form of anemia suggests ankylostomiasis. The existence of malignant disease, leprosy, infantile paralysis, gout, and especially of rheumatoid arthritis, has been demonstrated, while at least one mummy has been found possessed of fibrous adhesions consequent on appendicitis.

Perhaps the oldest pathologic specimen that has ever been thoroughly studied is the urinary calculus investigated and reported by Shattock.[2] This was found lying among the pelvic bones in the grave of a boy, aged 16 years, and associated findings showed that the grave was that of an individual of the predynastic period, some generations at least before the advent of the first dynastic king, about 4800 B. C. This calculus on analysis was found to have a central body composed chiefly of uric acid and urates, surrounded by a crust of phosphates, the entire stone having a diameter of 6.5 cm.

As is well known, urinary calculi are very common in Egypt in modern times, a fact which is ascribed to the frequency of infection of the urinary bladder with bilharzia, but Shattock was unable to demonstrate the presence of traces of these parasites or of their ova. Had bilharzia ova been present they could probably have been distinguished, for their chitinous covering is extremely resistant to time and solvents.

The same author has also studied one of a group of four calculi coming from a tomb of the second dynasty, and computed to be about 600 years later than the first specimen. These calculi were found lying beside the first lumbar vertebræ and are therefore assumed to be renal. The one examined was 1.6 cm. in diameter and was found to consist of calcium combined with carbonic, phosphoric and oxalic acids. In the center was a cavity containing great numbers of mould conidia, but no bil-

1. Edinburgh Med. Jour., February, 1909.
2. Trans. Path. Soc. London, 1905, lvi, 275.

harzia ova. It would be interesting to record that these mummified moulds were found to be still living after a sleep of sixty or more centuries, but, unfortunately for romance, the plates remained sterile!

PRESIDENT TAFT AND THE PROPOSED NATIONAL BUREAU OF PUBLIC HEALTH

The fact that President Taft, during the rush incident to the first few weeks of his administration, has taken a business-like initiative in an effort to secure a satisfactory national public health policy is a comforting reassurance to the friends of that movement. This step on the part of the President can not, however, be a matter of surprise to the readers of THE JOURNAL who, from time to time, have been advised of his active interest in great sanitary and scientific problems that have come under his administrative supervision.

In the Philippines, he not only placed sanitation on a strong footing, but established original scientific investigation and general medical education on a firmer governmental foundation than obtains in any of the states. The moment that he, as Secretary of War, took charge of the affairs in the Isthmian Canal Zone, the sanitary administration was for the first time given proper status in that great undertaking. His activities in improving the conditions of the Army Medical Corps and his recent address before the University of Pennsylvania are additional evidences, not only of his general interest in these and allied subjects, but that he has intimate knowledge at first hand on all of them.

President Taft's action in approaching this question by requesting the views of the Surgeon-General of the present Public Health and Marine-Hospital Service, is in line with practical governmental methods. The whole problem must be solved from the viewpoint of the existing public-health agencies, their possible expansion and their necessary coordination. The proposed new public health bureau must be an evolution and not a *de novo* creation. It will be much better to have such an evolution come from inside rather than outside of governmental influences. And it is distinctly of the highest importance that the attitude of the existing bureaus that will be more or less affected by the change shall be determined before specific proposals are formulated.

The necessity of considering the attitude of existing bureaus is shown by the fate of the proposal, under the preceding administration, to establish a national health bureau by executive order. This constituted a distinct departure from precedent and was evidently regarded as an encroachment on the prerogatives of Congress. No bureau has ever yet been so established and the attitude of Congress indicates that such an innovation will not soon be realized. The agitation was, however, of distinct educational value. The country at large is ready for a national health bureau and will welcome it, no matter by what means it is secured.

EARLY DIAGNOSIS OF PULMONARY TUBERCULOSIS

A few weeks ago[1] we discussed the reasons why an early diagnosis was not oftener made in pulmonary tuberculosis. It seems possible that we emphasized too strongly the rôle played by the patient, judging from a recent paper by Stoll,[2] who thinks that the physician is more to blame than the patient. Stoll submitted to 150 tuberculous patients a series of questions asking how long they had been ill before consulting a physician, how long before they were properly examined, and how many months elapsed before they were told that they had tuberculosis and were instructed regarding the care of their sputum. The figures obtained showed that nearly 80 per cent. of the patients delayed over five months before consulting a physician. When they did seek medical advice 43 per cent. were not examined at the first consultation. Curiously enough the incipient cases consulted the physician earliest and were the ones most frequently examined properly at their first visit. A correct diagnosis was reached at first in only 56 per cent. of the patients, and this notwithstanding the fact that over 80 per cent. had been ill over five months. While too much dependence can not be placed on the statements made by the patients in this investigation, still the results are worthy of consideration and may be regarded as a sad commentary on the methods of many physicians. It emphasizes a statement made years ago by Weir Mitchell, in an address to medical students, that more mistakes in medicine were due to carelessness than to ignorance. We should always bear in mind that early diagnosis of pulmonary tuberculosis is not easy, and seldom possible, unless the patients are stripped and the examination is most thoroughly and carefully made.

RECENT MODIFICATIONS OF THE WASSERMANN REACTION—A CORRECTION

An unfortunate accidental error occurred in our editorial[3] designed to facilitate the clinical use of the Wassermann test for syphilis. In describing Noguchi's test, these words are used: "This means that the suspension of sheep blood corpuscles and patient's serum are all that the physician himself needs to furnish." Now the point is that no sheep corpuscles or any corpuscles other than human are needed in the test as simplified by Noguchi.

Medical News

ARKANSAS

Personal.—Dr. Leonidas Kirby, Harrison, William B. Lawrence, Batesville, and James H. Lenow, Little Rock, have been appointed members of the medical board of the University of Arkansas, to fill vacancies.

Illegal Practitioners Fined.—"Dr." Caponia, Des Arc, who was arrested March 3, on the charge of practicing medicine without a license, is said to have been fined $25 and costs.——In the case of Dr. William H. Hickson, Hot Springs, charged with violating the city ordinance prohibiting the drumming of patients, a fine of $25 is said to have been assessed against the defendant.

1. THE JOURNAL, Feb. 20, 1909.
2. Yale Med. Jour., March, 1909.
3. THE JOURNAL, April 3, p. 1113.

Asks Appropriation for Tuberculosis Hospital.—The Arkansas Association for the Relief and Control of Tuberculosis, at its meeting in Little Rock, unanimously agreed to submit a bill to the legislature asking for an appropriation of $110,000 for the establishment of a tuberculosis hospital, and its maintenance for two years. The following officers were re-elected: Dr. John S. Shibley, Paris, president; Drs. William B. Lawrence, Batesville, and Henry C. Dunavant, Osceola, vice-presidents, and Dr. Malcue G. Thompson, Hot Springs, secretary-treasurer.

DELAWARE

Diphtheria Closes Schools.—There are said to be twenty or more cases of diphtheria in Lewes, and the public schools and Sunday schools have been closed.

Personal.—Dr. Peter W. Tomlinson, Wilmington, has declined reappointment as a member of the State Medical Society Examining Board.——Dr. L. August H. Bishop, Dover, has been elected jail physician of Kent county, vice Dr. Edwin S. Anderson, resigned.

Vital Statistics.—The report of Dr. Abram E. Frantz, Wilmington, secretary of the Delaware State Board of Health, shows that in the biennium ended June 30, 1908, there were 4,801 deaths, and in the same time 3,079 births and 3,810 marriages were reported.

Deaths from Tuberculosis in Wilmington.—The secretary of the board of health has prepared a statement of deaths from tuberculosis for periods of five years, which shows a steady decrease in the death rate from that disease. In 1885, there were 150 deaths out of a population of 55,800; in 1890, 165 occurred out of a population of 61,427; in 1895, 169 out of a population of 72,500; in 1900, 164 deaths were reported out of a population of 76,500; in 1905, 152 deaths occurred out of a population of 87,000; and in 1908 the same number of deaths were reported with a population of 91,500.

DISTRICT OF COLUMBIA

Fire in Medical Department.—A fire occurred March 19 in the Medical Department of George Washington University as a result of an explosion, and caused considerable damage.

Acquitted.—Dr. Patrick J. McDonald, Providence Hospital, charged with failing to report a case of smallpox, and with neglecting to detain the patient until the health department had been notified, was acquitted March 16.

Hazen Obtains License.—The District Board of Medical Supervisors has issued a license to practice medicine to Henry H. Hazen, who then dismissed his suit asking for a writ of mandamus to compel the board to grant him license to practice.

Personal.—Dr. J. H. Castle, for three years chief of the division of chemistry in the hygienic laboratory, Washington, has been elected professor of chemistry in the University of Virginia.——Dr. William C. Woodward, health officer of Washington, who has been ill for two weeks, has recovered.

Physicians of Services To Need No License.—Senator Gallinger has submitted a favorable report from the District committee on the bill to amend the act regulating medicine and surgery in the District, which allows honorably discharged surgeons of the Army, Navy and Marine Corps to practice in Washington without obtaining a license.

Resolutions Commend Dr. Wiley.—The Medical Society of the District of Columbia, at its meeting, March 17, unanimously adopted resolutions setting forth the sterling integrity, courage, persistent justice and skill and accomplishments as a chemist of Dr. Harvey W. Wiley; heartily commending and endorsing his arduous and difficult work in protecting the American people from impurities and adulterations in their food, drink and medicine, and trusting that his efforts will be generously sustained by the government, supported by the cordial sympathy of his professional colleagues and encouraged by the sincere appreciation of a grateful populace.

FLORIDA

War on Phthisis.—On March 24, the ninety-day campaign against tuberculosis in Florida closed. The work has extended throughout the state and has been prosecuted with unusual vigor by the state health department, State Federation of Women's Clubs, and other organizations.

Sanitarium Opened.—Pensacola Sanitarium was recently opened to receive patients. The institution has been incorporated with a capital stock of $20,000, and has a capacity for 22 patients. The officers are Dr. Clarence Hutchinson, president; Dr. Marion E. Quina, vice-president; Dr. William A. J. Pollock, secretary, and Dr. Frank G. Renshaw, treasurer.

Society Meetings.—Suwanee County Medical Association has elected the following officers: President, Dr. Will C. White; vice-president, Dr. Lester J. Efride, and secretary-treasurer, Dr. Thomas S. Anderson, all of Live Oak.——At a meeting held February 23, in Jacksonville, the organization of the new Duval County Antituberculosis Society was perfected, and a constitution and by-laws were adopted.——Medical societies have recently been organized in Santa Rosa and Walton counties.

GEORGIA

Tuberculosis Campaign Begins.—On March 27, the ninety-day antituberculosis campaign was opened in Atlanta. The exhibit will remain in that city until April 15.

Personal.—Dr. Louis M. Warfield, who has been practicing in St. Louis for four years, has returned to Savannah, his home town, to practice.——Dr. Newton Z. Anderson has been appointed city physician of Covington.

Object to Tuberculosis Dispensary.—Twenty-nine tenants of the Gould Building, Atlanta, have petitioned that the office and free dispensary of the Antituberculosis Association on the top floor of the building be discontinued.

Expelled from Society.—Dr. Arnold M. Rosett, Savannah, found guilty of, and serving one year's imprisonment for performing an illegal operation, is said to have been expelled from membership by the Georgia Medical Society, March 23.

Found Guilty.—In the case of Dr. Rose F. Monnish, Atlanta, charged with illegal use of the mails, the defendant is said to have been found guilty on two counts, March 24. Sentence was suspended and the defendant was released on bail of $2,000.

ILLINOIS

Sanatorium Needs More Funds.—The Chicago-Winfield Tuberculosis Sanatorium now has 20 patients, 15 of whom are being treated free. The directors have decided to open a subscription list for annual memberships, in order that the full quota of patients may be accommodated as soon as possible.

Against Tuberculosis.—At the annual meeting of the Morgan County Antituberculosis Society, held in Jacksonville March 29, an illustrated lecture on tuberculosis was delivered by Dr. James W. Pettit, Ottawa, president of the Illinois State Medical Society, Alfred T. Capps was re-elected president of the society, and Dr. Tully O. Hardesty was re-elected secretary.

Progress of Sterilization Bill.—The bill of Senator Womack to provide for the sterilization of habitual criminals and imbeciles, which is a duplicate of the Indiana sterilization bill, has been reported favorably by the judiciary committee, and ordered to a second reading. The Southern District Medical Society, Chicago, adopted resolutions, March 29, favoring sterilization.

Asks Appropriation for State Hospital.—Dr. George A. Zeller, superintendent of the Illinois General Hospital for the Insane, South Bartonville, appeared before the house committee on appropriations, March 31, and asked for an appropriation sufficient to build seven new cottages for the institution. There are now nearly 2,200 inmates and more are constantly arriving. Dr. Zeller also asked for a new dining hall for patients.

Conference on Public Health.—A conference on public health will be held at the University of Illinois, Urbana, April 19-24, under the auspices of the University of Illinois and the Illinois State Board of Health. Prof. W. T. Sedgwick of the Massachusetts Institute of Technology will deliver a series of lectures on "Science in the Service of Public Health"; Dr. T. J. Bryan, chemist of the Illinois State Food Commission, will speak April 20 on "The Relation of Pure Food to Public Health," and a special session of health officers will be held April 23 for a general discussion of problems of health in the state. This session will be opened by Dr. James A. Egan, secretary of the State Board of Health. Municipalities and villages of the state are especially invited to send their health officers to this conference.

Chicago

Interne Examination.—Of the 117 medical students who took the county civil service examination March 9 to 11, 48 attained the required standing, one of whom was a woman.

Memorial for Nicholas Senn.—At the meeting of the Nicholas Senn Club, March 29, it was proposed to erect a memorial to Dr. Senn in one of the Chicago parks. Plans were also discussed for the establishing of a memorial lectureship or for lit-

ting up a room in the new Crerar Library in memory of Dr. Senn.

Diphtheria Rate High.—The department of health, in studying the high death rate from diphtheria, finds three major causes: First, that the doctor does not see the patient early enough; second, that he does not give enough antitoxin, and third, that in prolonged cases he does not repeat the antitoxin early enough.

IOWA

Society Meetings.—At the fifteenth annual meeting of the Southwestern Iowa Medical Association, held in Creston, February 16, Dr. Thomas M. Th ockmorton, Chariton, was elected president; Dr. Homer L. Sweet, Mt. Etna, vice-president, and Dr. John W. Reynolds, Creston, secretary-treasurer. It was decided to hold the next meeting in Albia.——At the annual meeting of the Rural Mutual Medical Society of Northeastern Iowa, held at Farley, February 17, the following officers were elected: President, Dr. John Mueller, Dyersville; vice-president, Dr. Alonzo L. McNeil, Epworth; secretary, Dr. Claude B. Rogers, Earlville; and censors, Drs. Charles A. Kearney, Farley; Joseph L. Abeln, New Vienna; Emil Mueller, Dyersville; Franklin Reyner, Epworth; J. Irwin Limburg, Farley; Frank N. Schroeder, Holy Cross; Edward J. Wintenburg, Delhi; Martin E. Dittmer, Colesburg, and Salmon S. Douglas, Earlville.——At the annual meeting of the Waterloo City Medical Society, held February 17, Dr. Charles A. Waterbury was elected president; Dr. Elmer E. Dunkelburg, vice-president; Dr. DeWitt C. Huntoon, secretary, and Dr. Edwin R. Shannon, censor.

KENTUCKY

Association Changes Name.—At the February meeting of the Kentucky Antituberculosis Association, the name was changed to the Louisville Antituberculosis Association.

Forbids Distribution of Medical Samples.—The Owensboro city council has passed an ordinance forbidding the distribution from house to house of medicine samples of any sort.

Medical Property Transferred.—Formal transfer of the properties of the Kentucky School of Medicine and the Louisville Medical College to the University of Louisville was made March 20, when the deeds for both holdings were put on record. This completes the merging of the three colleges, which took place last August.

Louisville Health Statistics.—The health department of Louisville, in its annual report for the fiscal year ended Aug. 31, 1908, shows a total death rate of 39.77, or 250 fewer than for the preceding year. Tuberculosis leads the death causes with 229, and typhoid fever caused 109 deaths. During the year 3,981 births were reported. The health department urges a thorough system of school inspection and the establishment of a public abattoir.

Personal.—Dr. John M. Wells, Carlisle, has been elected secretary and health officer, and Drs. Oliver S. Kash, Moorefield, Benjamin F. Reynolds, Carlisle, and Samuel R. Fisher, Headquarters, members of the Nicholas Board of Health.——Dr. J. Thomas Wallingford and Cleon C. Owens have been elected members of the Covington Board of Health.——Dr. John Goodman, Louisville, is reported to be critically ill with septicemia.

County Issue of State Journal.—On April 15, the *Kentucky Medical Journal* will issue a mid-monthly issue to be known as the Jefferson County issue. This issue will be made up entirely of proceedings of the Jefferson County Medical Society and its sections, and will be edited by Drs. Virgil E. Simpson, Dunning S. Wilson and Henry Enos Tuley. The money required for the publication of this number has been raised by advertisements secured in and around Louisville by Louisville practitioners. The University of Louisville Department of Medicine will have a special section.

MARYLAND

Personal.—Dr. Benjamin R. Benson, Jr., Cockeysville, has been appointed assistant surgeon at the New York Lying-In Hospital.——Dr. J. Percy Wade, superintendent of the Maryland Hospital for the Insane, Catonsville, is making a trip of Europe.——The late Dr. Asa S. Linthicum, Jessups, left an estate estimated to be worth more than $100,000.

Baltimore

Smallpox in House of Correction.—A case of smallpox has developed at the House of Correction, and 700 prisoners and attendants were vaccinated March 25, as a precaution against the spread of the disease.

Hospital Opened.—The formal opening exercises of Sydenham Hospital for Infectious Diseases were held April 3. The building will accommodate 32 patients. Dr. Warren P. Morrell is in charge of the institution.

Berliner Fellowship Awarded.—The committee in charge of the Sarah Berliner Research Fellowship for Women has awarded the fellowship work $1,200 a year for two years to Miss Caroline McGill, instructor in anatomy in the University of Missouri. The fellowship is available for research in physics, chemistry or biology either in Europe or America.

Testimonial to Dr. Keirle.—A movement is on foot of a subscription testimonial volume to Dr. Nathaniel G. Keirle, director of the Pasteur Institute. The volume will contain the collected published writings of Dr. Keirle on rabies, a sketch of his life and work, and his portrait. The committee having the matter in charge is composed of Drs. Harry Friedenwald, John W. Chambers and Archibald C. Harrison.

Laennec Society Election.—At the annual meeting of the Laennec Society, March 22, Dr. H. Barton Jacobs was re-elected president, and Dr. Louis Hamman, secretary. Dr. A. M. Forster, superintendent of the Eudowood Sanatorium for Consumptives, spoke on "Farming as a Healthful Diversion for Consumptives," and stated that $1,000 had been cleared at Eudowood by the sale of farm products raised by the patients during the last year, which made it possible to pay the farm hands wages for their labor.

Personal.—Drs. H. Barton Jacobs and J. Whitridge Williams have sailed for Europe.——Dr. Robert T. Miller, Jr., resident surgeon at the Johns Hopkins Hospital, has resigned, and has been succeeded by Dr. John W. Churchman. Dr. Miller was given a farewell dinner at the Baltimore Club by his associates, and will go to Europe for hospital study.——Dr. G. F. Sargent, Baltimore, has been appointed assistant physician of the Florida Hospital for the Insane, Tallahassee.——Dr. Wirt A. Duvall, Baltimore, captain and assistant surgeon of the Fourth Infantry, Maryland N. G., has resigned.

State Society Meeting.—The annual meeting of the Medical and Chirurgical Faculty of Maryland will be held in conformity with its constitution on the fourth Tuesday in April. In order to prevent any legal complications it is the intention of the officers to convene and transact the necessary business to constitute it a legal meeting, and then adjourn to May 13-15, the time selected for the dedication exercises of the new library building. On that occasion the building will be presented by Dr. Brush, the dedicatory address will be delivered by Dr. S. Weir Mitchell, and responses will be made by representatives of the New York Academy of Medicine, Boston Medical Library Association, Surgeon-General's Library, Washington, and the College of Physicians of Philadelphia. Osler Hall will be dedicated with an address by Dr. William H. Welch, and the annual dinner will be held there. The annual oration will be made by Dr. Osler. There will be presented a portrait of the late Dr. William H. Stokes, and a bronze memorial medal will be struck in commemoration of the occasion.

MICHIGAN

Bequest to Hospital.—By the will of the late Charles A. Rust, Saginaw, $25,000 is devised to the Saginaw General Hospital.

Society Elections.—The physicians of Grand Ledge have organized the Association of Grand Ledge Physicians, and have elected Dr. Ray T. Fuller, president; and Dr. Martha E. Hixon, secretary-treasurer.——The Grand Rapids Academy of Medicine, at its annual meeting February 3, elected Dr. Christian Van der Veen, president; Dr. Burton R. Corbus, vice-president; Dr. Abel J. Baker, secretary, and Dr. Charles Hooker, treasurer.

New Hospitals.—Dr. Guy L. Bliss has opened a hospital at Three Rivers in the Sage Building.——Dr. E. Ilmari Lindgren, Ishpeming, will erect a hospital in Marquette, to accommodate from twenty-five to thirty patients.——The Grand Rapids Antituberculosis Society has established a free dispensary at 23 Park Street, at which physicians and nurses are on duty from 12 to 1 on Monday, Wednesday and Friday of each week.

MISSOURI

Association Chartered.—The secretary of state has issued a charter for the Nevada Medical and Surgical Association, incorporated by Drs. Isaac W. Amerman, V. O. Williams and others.

Ground Broken for Hospital.—Ground was broken March 17 for the addition to St. John's Hospital, Joplin, to cost $30,000.

The Sisters of Mercy have raised one-half of the required amount and the remainder is to be obtained by subscription.

Fined for Not Registering Certificate.—James A. Burke, consulting physician of a medical company of Kansas City, is said to have been fined $25, March 15, for practicing medicine without having first registered his certificate in the county as required by law.

Revocation of Licenses.—The State Board of Health, at its March session in Kansas City, is said to have revoked the license of Dr. William H. C. Sterett, Corning.——Action toward revocation of the licenses of Drs. George Schmitt and J. A. Lughson, Kansas City, was stopped by injunction from the Wharterfield court on March 27. The temporary order restraining the board from revoking these licenses was dissolved on ruling of the judge that the Circuit Court had no jurisdiction, and that the physicians in question had redress in appeal from the decision of the state board. The board charged that these two physicians sold cocain in drug stores, and they were fined an aggregate of $10,500 in the municipal court.

St. Louis

Unlicensed Practitioner Fined.—Henry Hisserich is said to have been found guilty of practicing medicine without a license and fined $100, March 26.

New Tuberculosis Commission.—The mayor has signed the bill to create a second tuberculosis commission to take the place of the present commission whose term expires in a short time. The new commission is to be appointed for five years, and an annual appropriation of $25,000 a year has been made for it.

Social Service Hospital.—The Social Service Hospital, formerly the Protestant Hospital, 1011 North Eighth Street, has been entirely reorganized. As the name indicates, a social service department will form an integral part of the institution, which is located in the most densely populated portion of the city. The medical staff is as follows: Drs. Frances L. Bishop, Cyrus E. Burford, William W. Graves, John Green, Jr., Horace W. Soper, George S. Drake, Jr., Archer O'Reilly, Roy P. Sholz and Frederick J. Taussig.

NEW HAMPSHIRE

Medical School Commencement.—The graduating exercises of Dartmouth Medical School were held in Dartmouth Hall, Hanover, March 26, when degrees were conferred on a class of fourteen. Dr. Frank E. Kittredge, Nashua, delivered the doctorate address.

Surgical Club Meets.—The semi-annual meeting of the New Hampshire Surgical Club was held at Nashua March 18, and was the largest gathering ever held by the organization. Clinics were held in the morning at the Nashua Emergency Hospital by Drs. John M. Gile, Hanover, Fred B. Lund, Boston, and others. At the afternoon session Dr. Gile read a paper entitled "A Survey of Our Present Knowledge of Pancreatitis"; Dr. Alonzo S. Wallace, Nashua, spoke on "The Vaccine Treatment of Cancer," and Dr. Fred B. Lund discussed "Acute Gastric Hemorrhage and Its Treatment."

NEW YORK

Physicians in New York.—There are 13,937 physicians in New York, and of these 12,784 are registered as regular; 931 as homeopaths and 292 as eclectics. There are 283 medical colleges represented by their graduates in the state, 103 of which are in foreign countries.

County Tuberculosis Hospitals.—The State Charities Aid Association has drafted and introduced a bill which amends the law so that private patients may be taken in county hospitals for the care of persons suffering from tuberculosis. It provides that such a hospital shall not be a part of the almshouse.

Large Gift for Crippled Children.—Mrs. Elizabeth Milbank Anderson has given $500,000 to the Children's Aid Society to purchase the Chappequa Mountain property in Westchester county in order to establish a free sanitarium which will be open all the year around for sick and crippled children. Of the sum given, $150,000 was paid for the purchase of the property and $250,000 will be used as an endowment fund.

For Inebriety Board.—A bill has been introduced into the legislature providing for the appointment of a board of inebriety for the City of New York to consist of five members, to serve without pay for a term of five years each, and for the establishment of an inebriety hospital and an industrial colony in which persons arrested for public intoxication may be detained and treated scientifically. This measure was framed by the standing committee on hospitals of the State Charities Aid Association. The five members are to be named by the mayor after nominations submitted by the heads of the United Hebrew Charities, the Association for Improving the Condition of the Poor and the New York Council of the Society of St. Vincent de Paul.

State Charities Report.—The State Charities Aid Association has issued its thirty-sixth annual report for the year ended Nov. 30, 1908. This is a voluntary association having local committees which have supervised the almshouses and public hospitals in forty-three counties of the state. A careful study has been made of the ambulance service in hospitals. As a result of the campaign by the Association for the Prevention of Tuberculosis in the state, outside of New York City, six dispensaries have been opened, two large hospitals have been built, and visiting nurses for patients have been provided in six cities. Tuberculosis exhibits have been shown at the state fair and at thirty-five county fairs, and 344,640 pieces of literature have been distributed in this way. The association has placed 1,082 children in families and it is estimated that if these children were collected in an institution, the cost to the institution would be at least $500,000, and the cost of maintenance $100,000 per annum. The total expenditures for the year amounted to $64,295.

New York City

Automobile Ambulance.—A twenty-horse-power automobile ambulance has been put on service at Bellevue Hospital. The machine is equipped with every appliance, making it practically a traveling hospital.

The McCosh Memorial.—The committee in charge of the Andrew J. McCosh Memorial announces that more than $100,000 has been subscribed. The fund is to be devoted to the use of the new buildings of the Presbyterian Hospital.

May Lose Million Dollar Bequest.—Some time ago Louis A. Heinsheimer bequeathed $1,000,000 to Jewish charities on condition that existing institutions in the city should form a federation, but Mount Sinai Hospital has steadfastly refused to consider the formation of such a federation, although several meetings have been held, and the time allowed by the will for the consummation of such a federation has almost expired.

To Fight Cocain Sale.—Dr. Walter Bensel, city sanitary superintendent, has made an appeal to the Woman's Municipal League for money to enable the health authorities to fight the cocain traffic. He states that many physicians buy cocain for the purpose of selling it. The facts are known to the Board of Health, but there is no fund for the purpose of making convictions. It is said that the traffic in this drug is rapidly growing in the city.

Ozone a Germicide.—About two months ago Dr. Alvah H. Doty, health officer of the Port of New York, had a plant for the manufacture of ozone installed in his laboratory at Quarantine, and since that time he has been experimenting with this gas. He finds that it has several distinct advantages over steam and formaldehyd. The results of Dr. Doty's experiments will be of great practical use on shipboard as well as in sick rooms, theaters and public buildings.

Campaign to Save Babies.—New York's work to reduce the infant mortality was begun for the summer of 1909 April 5, by a meeting of fifty-five private agencies with officers of the department of health. The invitations were issued by Dr. Darlington and the conference on summer care of babies which was organized in 1908. It is planned to have two or three meetings before summer comes, so that hospitals, dispensaries, diet kitchens, and fresh air societies may be thoroughly prepared. The New York Milk Committee, which made an appeal for money last January with which to continue the milk depots for infants, states that $21,000 has been raised since that time, which will enable them to pay off their deficit and to support the seven milk stations until September 1. At present the committee is feeding 585 babies and these constitute less than 7 per cent. of the tenement babies in Manhattan absolutely without proper food or instructional supervision.

Classes for Consumptives.—The Bellevue tuberculosis clinic has started a series of classes on the plan of the Emmanuel Church of Boston. Hitherto the clinic has been able to exercise only a very indefinite supervision over the 700 patients who visit the clinic. From among the more intelligent, fifteen

patients have been selected for the first class, and they meet once a week on the deck of the ferry boat, "Southfield," which is the Bellevue tuberculosis camp. Here progress is reported, records are compared, and advice and encouragement given. Each patient keeps his own record, takes his temperature four times a day, records the amount of nourishment taken, the amount of rest, and the time spent in the open air. A nurse supervises home arrangements and endeavors to bring them up to conditions in a sanatorium as nearly as possible. The families of the patients are examined and any member who has a predisposition to the disease is treated, as it is the aim of the clinic to get the cases in the earliest stage.

PENNSYLVANIA

Personal.—Dr. Edward R. Walters has been appointed director of the Department of Health and Charities at Pittsburg.——Dr. William W. Cadbury has resigned as pathologist in the Henry Phipps Institute, Philadelphia, and sailed for China March 6, where he will aid in the establishment of a University Medical School in Canton.

Applies for Charter.—The Physicians' College of Pittsburg has applied to the governor for a charter for the purpose of purchasing real estate and establishing a permanent home. The incorporators plan an extension of the library of the college, the establishment of a medical museum, and the provision of a directory of trained nurses.

Child Labor Bill Passes.—With only two votes against it out of a possible 188, the child labor bill was passed in the house March 31. One of the new features of the bill is its prohibition of the employment of minors, less than 18 years of age in furnaces, tanneries, dynamite and powder factories or in other hazardous places. Further, it is made unlawful to employ minors, less than 16, in the manufacture of paints, acids, matches or in tobacco factories. Minors less than 14 are not to be employed in any establishments, and those between 14 and 16 must have a rudimentary knowledge of English, be physically capable and have an employment certificate issued by the school authorities. They shall not be employed more than ten hours in any one day, or after 9 o'clock at night, nor more than fifty-eight hours in any one week. Penalties for violation of law range from a fine of $10 to $50, or 10 to 90 days in prison, or both.

Philadelphia

Home-Coming Week at the University.—The University of Pennsylvania will observe home-coming week and has arranged a program extending from April 12 to 17.

Appropriations for the University of Pennsylvania.—On March 29, the House Appropriation Committee reported a bill recommending $700,000 to the University of Pennsylvania, or $200,000 less than the amount asked from the state by the institution.

Personal.—Dr. Charles A. Groff has been appointed assistant chief medical inspector to succeed the late Dr. Thomas J. Beatty.——Dr. Thomas S. Stewart is in Vienna.——Dr. William Drayton has been appointed to the division of Medical Inspection of the Board of Health.

State Appropriations.—The House Appropriations Committee reported favorably, March 31, appropriations to the following institutions: St. Joseph's Hospital, $50,000; Jewish Hospital, $40,000; Mercy Hospital, $40,000; Women's Hospital, $45,000; Fred Douglas Hospital, $22,000; Polyclinic Hospital, $145,000; Gynecean Hospital, $25,000; Lying-in Charity Hospital, $18,000; Medico-Chirurgical Hospital, $210,000; Kensington Hospital for Women, $45,000; Orthopedic Hospital, $33,000; Rush Hospital, $55,000; Garretson Hospital, $40,000; Howard Hospital, $22,000; Women's Medical College, $30,000; German Hospital, $60,000; St. Mary's Hospital, $30,000; Samaritan Hospital, $100,000; Stetson Hospital, $5,000; West Philadelphia Hospital for Women, $15,000; St. Christopher's Hospital, $21,000; Frankford Hospital, $70,000; Mt. Sinai Hospital, $65,000; Jefferson Medical College, $175,000; American Hospital for the Stomach, $20,000; Wills Eye Hospital, $90,000; and Jewish Sanatorium for Consumptives, $7,500.

GENERAL NEWS AND COMMENT

Opium Barred.—Beginning with April 1, neither opium nor any mixture or compound containing or representing opium in any form legally can be brought into the United States or any outlying possessions excepting for strictly medicinal purposes. This term is declared to mean for treatment or prevention of disease only.

Coming Meetings.—The twenty-fourth annual meeting of the Association of American Physicians will be held in the New Willard Hotel, Washington, D. C., May 11 and 12, under the presidency of Dr. Victor C. Vaughan, Ann Arbor. The annual dinner and smoker will be held May 11.——The annual meeting of the Surgeons of the Frisco System will be held in Fort Worth, Texas, April 26 to 28.

Oliver Wendell Holmes Centenary.—The centenary of the birth of Dr. Oliver Wendell Holmes will be celebrated April 27 at Harvard University, where he held the chair of anatomy and physiology from 1847 to 1882. Former President Eliot of Harvard will preside. Addresses will be made by Dr. Ralph Waldo Emerson, Concord; Dr. David Williams Cheever, Boston; Col. Thomas Wentworth Higginson, and Rev. Samuel M. Crothers, D.D.

Charities Changes Name.—*Charities and the Commons*, with the issue of April 3, changes its name to *The Survey* with the sub-title *Social-Charitable-Civic*. The magazine stands for the prevention of poverty, disease, crime and inefficiency. It examines conditions of life and labor and points where they fail, and shows how long hours, low pay, and insanitary housing, disease, intemperance, indiscriminate charity and lack of recreation break down character and efficiency.

Bacillus of Leprosy Cultivated.—Cable dispatches from Manila, March 28, announce that Dr. Moses Clegg, bacteriologist of the Bureau of Science, Manila, has succeeded in making five successful cultures of the bacillus of leprosy, and has carried them through successive generations. Dr. Clegg is said to have obtained organisms from both living and dead lepers. He has been equally successful in making cultures from amebic dysentery, and is said to have established symbolic relationship between the germ of the two diseases.

Canal Zone Health Report.—The chief sanitary officer of the Canal Zone, in his report for February, announces that the death rate for that month for employés was at the annual rate of 10.98 per 1,000. The death rate for the total population was 18.59 per 1,000, the lowest death rate since the United States has been in charge of the Isthmus. There was also a large diminution in the amount of sickness among employés in February as compared with January, the respective daily figures being 951 and 1,116. During January, 1,258 cases of malaria among employés were admitted to the hospital, and during February only 852. No case of yellow fever, plague or smallpox occurred during the month.

Twelfth International Congress on Alcoholism.—This biannual congress will convene in London, Eng., July 18, 1909, and last a week. This is really a medical congress, in which the latest studies and conclusions are presented from a strictly scientific point of view. Alcohol will be discussed in its relation to:

Lobar Pneumonia and Enteric Fever, by Dr. Holitscher, Karlsbad
Immunity, by Dr. Laitinen, Helingsford.
Temperature of the Body, by Prof. G. S. Woodhead, Cambridge
Muscular and Mental Fatigue, by Dr. W. R. Rivers, Cambridge
Resistive Power of the Brain, by Prof. Clouston, Edinburgh.
Nervous System—(Hospital and Asylum Practice), by Dr. F. W. Mott, London.
Inebriety and Insanity, by Dr. La Grain, Paris.
Legislation for the Inebriate, by Dr. Branthwaite, London.
Children, by Dr. Deutsch, Budapest.
Vital Statistics, by Dr. Hansen, Keil.
Home Life, by Drs. Bramwell and Booth, London.

The scientific section will hold five different meetings. There will also be general meetings and an educational section to take up sociologic problems. The undersigned, as honorary vice-president, has this matter in charge and will be glad to confer with anyone who would like to be present and take part. T. D. CROTHERS, Hartford, Conn.

Health of the Isthmus.—Col. William C. Gorgas, medical corps, U. S. Army, chief sanitary officer of the Canal Zone, in his annual report calls attention to the low death rate of employés, which has decreased from 41.37 per 1,000 in 1906 and 28.77 per 1,000 in 1907 to 13.01 in 1908. The death rate for the entire population of Panama, Colon and the Canal Zone has also decreased, the respective figures for the last three years being 49.10 per 1,000 in 1906, 33.63 in 1907, and 24.83 in 1909. In 1906 there were 69 deaths from dysentery out of 26,705 employés, in 1907 48 deaths out of 39,343 employés, and in 1908 16 deaths out of 43,819 employés. Similarly in malaria, in 1906 there were 233 deaths from malaria, in 1907 154 deaths and in 1908 73 deaths. Typhoid fever caused 98 deaths in 1907, but only 19 deaths in 1908. There has also been a great diminution in deaths from pneu-

monia. In 1906 there were 431 deaths from this cause; in 1907 328 and in 1908 93. Among white Americans from the United States there were 42 deaths during the year, one-half of which were from violence, the death rate from disease among this class being 3.84 per 1,000. The best sanitary work done he considers to be in malaria, as in 1906 821 out of every 1,000 admissions to the hospital were from that cause. In 1907 424 out of every 1,000, and in 1908 282 out of every 1,000. Beriberi caused 68 deaths in 1906, 53 in 1907, and 38 in 1908. More than three years have passed since a case of yellow fever has developed on the Isthmus, the last case of plague occurred in August, 1905, and no case of smallpox was reported during the year.

Therapists to Meet.—The tenth annual meeting of the American Therapeutic Society will be held in New Haven, Conn., May 6-8, under the presidency of Dr. Frederick H. Gerrish, Portland, Maine. The presidential address will be on the subject, "The Therapeutic Value of Hypnotic Suggestion." On the first day the symposium will be on "Diabetes," led by Drs. Alfred C. Croftan, Chicago; Solomon Solis Cohen, Philadelphia; Robert T. Morris, New York City, and Alfred King, Portland, Maine. On the second day, the symposium will be on "Diet," in which papers will be presented by Drs. Louis M. Gompertz, New Haven; Alexander D. Blackader, Montreal; Lafayette B. Mendel, New Haven; Frank P. Underhill, New Haven; Russell H. Chittenden, New Haven; Harvey W. Wiley, Washington, D. C., and M. Howard Fussell, Philadelphia. On the third day, the symposium will be on "Psychotherapy," and will be participated in by Drs. Morton Prince, Boston; Ernest Jones, Toronto; Edward W. Taylor, Boston; Tom A. Williams, Washington, D. C.; James J. Putnam, Boston; Boris Sidis, Brookline, Mass.; George A. Waterman, Boston, and John E. Donley, Providence, R. I. The president's reception will be held on the evening of May 7; the society will be entertained at luncheon and organ recital at University Hall by the local membership on the afternoon of May 7, and the annual dinner will take place at the Union League Club on the evening of May 8.

International Congress on Hygiene and Demography.—This congress will meet in Washington, D. C., Sept. 26-Oct. 1, 1910, according to the decision of the committee on organization, which held a preliminary meeting at the call of the Department of State in Washington, April 6. This convention was invited to Washington by the United States Government. Our Washington correspondent reports that the following members of the committee were present: Mr. Huntington Wilson, Assistant Secretary of State; Simon N. D. North, Director of the Census; Lieut. Col. Walter D. McCaw, of the Surgeon-General's Library; Dr. William H. Welch, Baltimore; Dr. John S. Billings, New York; Dr. John S. Fulton, Washington; General George M. Sternberg, Washington, D. C.; Medical Inspector Henry G. Beyer, U. S. Navy; Dr. Abraham Jacobi, New York; Dr. George H. Simmons, Chicago; and Dr. A. D. Melvin, Chief of the Bureau of Animal Industry, Washington, D. C. The committee made the following recommendations to the Department of State: For president, Dr. Henry P. Walcott, of Cambridge, Mass., president of the Massachusetts State Board of Health; for secretary-general, Dr. John S. Fulton, secretary-general of the last International Tuberculosis Congress; executive committee, Drs. Welch, of Baltimore; North, Beyer, McCaw, Wyman and Sternberg, of Washington; Biggs, Jacobi and Billings, of New York; the president, secretary-general and chairman of the organization committee, and Mr. Huntington Wilson, ex-officio members. It was recommended that the executive committee should arrange the general plan of organization, determine policy, organize a definite scope of sections and report to the Department of State under the supervision of which department the Congress will be held. The date of the meeting was tentatively fixed at Sept. 26 to Oct. 1, 1910.

CANADA

Unregistered Practitioner Found Guilty.—"Dr." Pelletier, Ottawa, charged with practicing medicine in the city without having registered as a physician in the Province of Ontario, is said to have been fined $25 and costs March 6.

Grenfell in Winnipeg.—Seventy medical men of Winnipeg attended a complimentary banquet in honor of Dr. Grenfell, March 27, Dr. John A. McArthur presiding. Dr. Grenfell made an address dealing with the phases of his work on the Labrador coast.

Proprietary Medicine Act in Force.—The Dominion Proprietary Medicine Act was put in force April 1. It provides that formulas must be put on labels if any of thirty-three common poisons are used in the mixture, and eight drugs which are used for the production of abortion are placed on the expurgatory list. It is now an offense in Canada to distribute samples of medicine from door to door.

Society Meetings.—At the annual meeting of the South Waterloo (Ont.) Medical Association, Dr. Robert J. Lockhart, Hespeler, was elected president; Dr. William S. Dakin, Galt, vice-president; Dr. Sylvester E. Charlton, Galt, secretary, and Dr. Ward A. Woolner, Ayr, treasurer.——St. Thomas (Ont.) Medical Association at its annual meeting elected Dr. Frederick Guest, president; Dr. John H. Cormack, vice-president; Dr. Duncan A. McKillop, secretary; Dr. C. E. Berkeley Duncombe, treasurer; Dr. Archibald Leitch, librarian, and Drs. George A. Marlatt, Archibald C. Campbell and Frank Lawrence, members of the executive council.——Sarnia (Ont.) Medical Library Association has elected Dr. David B. Bentley, president; Dr. Joseph A. Bell, vice-president; Dr. Robert G. McDonald, secretary-treasurer, and Dr. Thomas Bradley, librarian.

Hospital Notes.—St. Catherines Hospital has secured a site of seven acres for a tuberculosis sanatorium.——Brantford, Ont., is to have a tuberculosis sanatorium. The Ontario government has donated $4,000 and the citizens will raise $10,000.——Toronto voted in January to appropriate $50,000 to St. Michael's, Grace and Western hospitals in that city. The hospitals will not accept the donation if the city authorities insist on the condition that every patient that pays seventy cents a day must be treated by his own physician.——Final plans for the Manitoba Provincial Sanatorium at Ninette have been prepared and submitted to the trustees. Dr. David A. Stewart is to be superintendent of the sanatorium, and the first unit will probably be able to accommodate 60 patients.——The management of the Montreal General Hospital has decided to erect a new building to cost about half a million dollars. The institution when completed will accommodate 500 patients.——The new Winnipeg Children's Hospital will formally open February 6. The hospital is surrounded by two acres of land, and the building will accommodate 30 patients.

Fighting Tuberculosis in British Columbia.—At the annual meeting of the British Columbia Anti-Tuberculosis Society held recently in Victoria, the superintendent of the Sanatorium for Consumptives at Tranquille, reported that the number admitted during 1908 was 47 and the number discharged 34. Of the incipient cases, there were 12 apparent cures, one case of arrested disease, one progressive case and no deaths. Of the advanced cases, the disease was arrested in five; much improved in one; improved in one; stationary in one; progressive in two, and none died. Of the far-advanced cases, the disease was arrested in one; improved in one; stationary in one and progressive in one, and two died. The meteorologic report showed that out of 245 days of which records were taken, there were 207 days of bright sunshine and 38 days entirely without sunshine. The amount expended on building improvements during the year was more than $24,000. The work at this institution is confined solely to residents of British Columbia, although numerous applications have been received from all parts of Canada and from the northern and western states. The maintenance fund for the year showed a deficit of over $2,000. Dr. Charles J. Fagan, provincial medical health officer of British Columbia, was re-elected secretary of the society.

FOREIGN

Typhus at Kiev.—The epidemic at Kiev, Russia, has attained such proportions that there were 650 typhus patients in the public hospitals and 300 in the prison hospital February 23.

Fire Destroys Hospital at Venice.—The Ospedale di Campo San Piero at Venice was recently destroyed by fire, but the 160 patients were all safely transferred to neighboring houses or buildings, although the panic at first was indescribable and many escaped only in their night clothes. The hospital at Padua has set apart a pavilion for the reception of those able to be transferred to this distance.

French Congress for Neurology and Psychiatry.—The nineteenth Congress of French-speaking Neurologists and Alienists will be held this year at Nantes, August 2 to 8. The three subjects appointed for discussion are: "Obsessions in Psychiatry," "Chronic Chorea," and "The Insane in the Army from the Medicolegal Standpoint." The membership fee is $4, with a $2 fee for associate membership. For further particulars

address the secretary, Dr. C. Mirallié, 11, rue Copernic, Nantes, France.

Alleged Discovery of Germ of Trachoma.—None of the micro-organisms described by various writers hitherto as the specific germ of trachoma has given satisfactory inoculation experiments, but the cable now announces that Prof. R. Greef of Berlin, chief of the eye department at the Charité, has succeeded in inoculating apes with a micro-organism which he has discovered, and which he regards as the true causal germ. He has been making a special study of trachoma for a number of years, having been sent to the strongholds of trachoma in Westphalen and Posen by the government on different occasions to study the disease and means to combat it. His translation of Cajal's great work on the retina of vertebrates is a classic; his other works deal mostly also with the finer structure of the eye. Professor Greef will be 47 years old next June.

LONDON LETTER

(From Our Regular Correspondent)

LONDON, March 27, 1909.

Admission of Women to the Royal College of Surgeons

The end of the long struggle for the admission of women to the Royal College of Surgeons has been recorded in previous letter. According to the new by-law which has just been published women may be admitted members and fellows of the college and licentiates in dental surgery, but they will not be eligible for seats on the council, nor to take part in the elections to the Council nor to attend any meeting—except purely scientific ones—of the fellows or of the fellows and members, nor be elected examiners. The new by-laws, therefore, will probably prove anything but acceptable to medical women. The admission of women to the fellowship, the highest qualification of the college, and yet denying them the right, which has always accompanied this distinction, of taking part in the election of the council, is most inconsistent, but consistency is not a quality which troubles the English mind. Indeed, these by-laws exemplify the national characteristic of compromising in everything and adopting reforms in a cautious and gradual fashion.

Plague in India

During the present year plague is in abeyance in India and the deaths number only hundreds instead of thousands, but no one can foretell when it may reappear in epidemic form. Since the outbreak in the summer of 1896 the mortality has been appalling. In that year it began in the Bombay Presidency, where it caused 2,219 deaths, most of them in the city of Bombay. In the following year the mortality rose to 54,000. Then the disease spread inland to other provinces. In 1901 the deaths amounted to 283,000; in 1902, to 584,000, and in 1904, to 1,144,000. In 1905 over a million deaths occurred. In 1906 a great decrease occurred, the deaths falling to a third of those of the previous year. No explanation could be given for this sudden fall, and it was hoped that the disease had expended its virulence. But in 1907 it gained fresh vigor and caused more deaths than ever—1,316,000. Then another lull occurred and the number fell to 149,000 in 1908. The total deaths for the twelve and a half years since the disease appeared in epidemic form has reached the enormous figure of 6,200,000.

Medical Officers of Schools Condemn Violent Athletics

In consequence of a joint letter published in the London *Standard* by Sir Lauder Brunton, Sir Thomas Barlow, Dr. Goodhart, Dr. Hale White and Sir Alfred Fripp, stating that "school and cross country races over a mile in length are wholly unsuitable for boys under 19," an important discussion took place at the Medical Officers of Schools Association. In introducing the subject, Dr. Collier of Oxford emphatically denied that many schoolboys were injured by long-distance racing. But at the universities functional albuminuria was frequently produced by rowing. Dr. Goodhart said that the nervous effect of long races was felt in after life. After considerable discussion, in which many speakers said they had never observed ill effects from school athletics, though they insisted on the necessity of medical examination before the boys were permitted to take part in them, it was decided that "only a few of the stronger and older boys should be allowed to compete for the longer distances. . . . Competitions in long-distance diving and in long-distance swimming are dangerous for adolescents, and the so-called Marathon races are wholly inappropriate."

PARIS LETTER

(From Our Regular Correspondent)

PARIS, March 23, 1909.

An Association of Medical Teachers

There has been founded, on the initiative of the Faculty of Lyons, an association to protect the material interests of the members of the teaching body of the faculty in regard to the superior administration and the public authorities, as well as to study together connectedly the problem of the organization of medical studies. The first general meeting of this association will take place at Paris April 2-4, when the following subjects will be discussed: (1) The competitive examination and the privat-docent system, regarded as a recruiting-ground for the teaching body of the faculty, by Professors Gross and Michel (of Nancy); (2) the reform of the competitive examination for the assistant professorship, by Professor Grasset of Montpellier and Professor Charmeil of Lille; (3) specialization of the *agrégation*, by Drs. A. Broca, Brunot, and P. Teissier, *agrégés*, the faculty of Paris; (4) nomination of *agrégés* on a single list (one for all the faculties) or on multiple lists (one for each faculty), by Professor Réclus of Paris and Dr. Barrier, *agrégés* at Toulouse; (5) transformation of the temporary position of *agrégé* to a permanent post, by Professor Arnozan of Bordeaux. While the first four questions are connected with recent events, the fifth has always occupied the attention of the teaching body of our faculties, for, contrary to the usage in the faculties of science and jurisprudence, the *agrégés* in which are appointed for life, the *agrégés* of the faculties of medicine are nominated only for a period of nine years, which renders their material status precarious and often prevents them from devoting themselves entirely to teaching.

The Consumption of Alcohol and Absinthe in France

The statistics and chart showing the consumption of alcohol and absinthe in France during the year 1907 have been recently published. In glancing over the chart one is struck by the inequality of the consumption in the different districts of France. A compact group of 21 departments which, starting from Paris, embraces part of the northeast, the north, and the west of France—the departments producing beer and cider—forms a large black blot. It is there that the greatest consumption of alcohol occurs. Seine Inférieure takes the lead, with nearly 12 liters *per capita;* the consumption in the other departments of this group ranges from 4.06 (Seine) to 9.11 liters. The departments on the east and southeast consume from 2 to 4 liters *per capita.* Finally, one sees on the chart a great white space, extending over the center, the southwest, and a large part of the east; this represents the departments in which the consumption of alcohol falls below 2 liters *per capita.* The consumption of alcohol is higher in the towns than in the country, the proportion remaining the same according to the groups of departments above indicated. One reassuring deduction may be drawn from these statistics, namely, that the consumption of alcohol (but not of absinthe) tends generally to diminish, and that this diminution is more rapid in the town than in the country. This is proved by comparison of the figures for 1897 and 1907. Havre and Rouen, which head the list, have dropped from 19 to 15 and from 17.51 to 13.79 liters *per capita;* Paris from 7.95 to 3.87; Marseilles from 7.58 to 3.45; Lyons from 5.73 to 2.59; Bordeaux from 4.52 to 2.75; Nice from 5.09 to 2.32; Toulon from 8.08 to 4.70; Montpellier from 5.27 to 2.27, etc.

The drop is perceptible in every district. It is to be attributed in part to the increased taxation voted by parliament, which has led the liquor producers to reduce the proportion of alcohol in their liquors; in part to the town-dues (*taxes d'octroi*) that the towns have imposed on alcohol, and, finally, in part to the success of the anti-alcohol movement. Another cause of this diminution has been the prohibition of alcohol in the barracks (*casernes*). During their term of compulsory military service young men are little by little broken of the habit of drinking alcohol, and they bring these new morals with them on their return to civilian life.

However, if the consumption of alcohol, generally speaking, has diminished in France, the statistics reveal another danger, namely an increased consumption of absinthe. In this the south takes a startling lead over the north. It is the provinces of the south, southeast and east which drink most absinthe. Marseilles stands at the head, with 3 liters of pure absinthe *per capita;* on the other hand, in the departments of the north, center and west, the consumption of absinthe does not reach 1 liter *per capita.*

A Girdle of Parks Around Paris

Most of the great cities of Europe and America outlined a plan in advance for work to be executed later. Thus London, Berlin, Manchester, Vienna and Hamburg reserved around the heart of the city large open spaces for parks, playgrounds, etc. In America, New York, Boston, Philadelphia, Baltimore, Chicago and San Francisco are surrounded by a girdle of parks, assuring to the population air and light according to the requirements of public hygiene. Paris has no plan of this kind outlined, and all such work is done haphazard. The Social Museum (*Musée social*) has taken up the matter and organized two years ago a special department on urban and rural hygiene to study the means for remedying this deficiency. The department has prepared a plan which takes note of the present crowded condition of Paris, and proposes to repurchase from the government the fortifications around Paris, as well as a part of the adjoining military zone, and to divide the land into nine large parks with an average area of 15 hectares each (about 30 acres) and 13 playgrounds of an average of 1½ hectares (about 3 acres). This work will cost 75 millions of francs, out of the 145 which the sale of the surplus land will bring in; the remaining 70 millions represent the sum that the city of Paris will pay into the national treasury for the land. The plan thus promotes public hygiene without expense to the people of Paris. On March 5 a delegation from the *Musée social* laid the plan before the secretary of the interior, M. Clemenceau, who approved of it, and the matter is now under discussion by the municipal and national authorities.

BERLIN LETTER

(From Our Regular Correspondent)

BERLIN, March 15, 1909.

Practical Value of the Wassermann Reaction for Syphilis

An important discussion on the clinical value of the so-called Wassermann serum reaction for syphilis took place a short time ago in the Society for Internal Medicine of this city.

One of the speakers, Dr. F. Lesser, states that in 2,000 cases he has never found the reaction positive unless syphilis was present or unless there was a well-founded suspicion of its presence. The reaction, to be sure, is marked in many cases of scarlet fever, but this exception has no practical significance. The negative result of the serum reaction, however, does not argue against the presence of syphilis. In cases of hereditary lues the reaction is almost always strongly positive, and indeed survives the first decade. Either the watery or alcoholic extract of a syphilitic liver or an alcoholic extract of normal heart may be used, but Lesser believes that Wassermann's original directions to employ a watery extract of the liver give the best results. In a primary lesion, the reaction appears first, as a rule, after a three weeks' duration of the primary sore. For this reason Lesser regards the reaction as unsuitable for the differential diagnosis between chancre and chancroid.

In rare cases a positive reaction is obtained before a primary lesion is demonstrable. In cases of progressive paralysis Lesser has constantly obtained a positive reaction. He therefore has no hesitation in attributing the paralysis to syphilis without exception. In tabes he has obtained a positive reaction in only 56 per cent. of the cases. Lesser found that in most cases it was possible by an energetic specific treatment to transform a positive into a negative reaction. He concludes, therefore, that when the reaction is positive the syphilitic virus is still active, and that it is the duty of the physician in such cases to institute antisyphilitic treatment. The reaction gives no basis for determining the severity, extent or localization of the disease. The diseased focus may be situated where it can do no harm; but it is to be remembered that every syphilitic who gives a positive reaction is exposed to the danger of developing tabes or progressive paralysis. Lesser has never seen a change of the reaction from the use of atoxyl.

The second speaker, Professor Blaschko, though likewise convinced of the diagnostic value of the reaction, calls attention to the fact that complement deviation has also been observed in occasional cases of leprosy, frambesia, sleeping sickness, scarlatina, severe diabetes, and after vaccination. On the other hand, there are cases in which syphilis is clinically certain, but the reaction fails. These cases may be isolated lesions of the skin or mucous membrane, or advanced cases of tabes and cerebral syphilis, or, finally, relatively often affections of the bones. Blaschko believes that the negative reaction obtained as a result of treatment is seldom permanent or of long duration, particularly in early cases, while in the later stages the influence of treatment on the reaction appears to be more lasting. Blaschko thinks that patients should be treated until a negative reaction is obtained, as a general rule, but that the possible damage to the patient from a long-continued mercurial treatment must always be borne in mind.

Blaschko also believes that treatment should be begun whenever the reaction is positive, even if visible lesions are lacking. Syphilitics should be subjected at regular intervals not only to clinical, but also to a serodiagnostic examination, the latter to be made several times a year in the early years and later yearly. In many cases, to be sure, it will be necessary, even in the later years, to repeat the examinations several times in a year. The prognostic value of the reaction, positive or negative, is slight in the first three years of the disease.

In the debate on these papers most of the speakers expressed themselves more reservedly than the two leaders regarding the value of the reaction for diagnosis, prognosis and therapy.

An assistant of the clinician, E. Lesser, emphatically believed that we were not yet justified in placing the diagnostic value of the serum reaction on a par with that of the well-known clinical symptoms.

Professor Wassermann emphasized the fact that he had from the beginning recommended that significance should be attributed only to positive reactions and not to negative. He said that in ordinary practice alcoholic extracts from normal organs would answer for eliciting the reaction, but in laboratories which deal specially with the serum diagnosis of syphilis there must be on hand, as a standard for control, a watery extract prepared according to the original directions which should be frequently tested for possible changes.

Increase of Insane in Prussia

While according to the last census, taken Dec. 1, 1905, the number of deaf mutes and blind in Prussia had relatively decreased, a regrettable increase of the insane was ascertained. In 1880 there were 66,345 insane in Prussia; in 1905, 139,182; 24.3 per 10,000 inhabitants in 1880, 37.3 in 1905. While the number of inhabitants increased 36.7 per cent. in twenty-five years, the number of insane increased 110 per cent. It must be noted, however, that the term "insane" was given a wider meaning in 1905 than in previous censuses, which accounts for a part of this striking increase.

VIENNA LETTER

(From Our Regular Correspondent)

VIENNA, March 20, 1909.

Appointment of von Strümpell

Finally, the *Wiener Zeitung* publishes the appointment of Professor von Strümpell to the chair of the third medical clinic in Vienna, as successor of Professor Schrötter. As pointed out in my last letter, there were some apparently uncontrollable influences at work, trying to prevent, if possible, the appointment, but the energetic attitude of the senate of the university succeeded in impressing on the determining personage that a public scandal would arise if the proper course were not adhered to, so it was deemed best to fill the vacancy.

Health of the Viennese Laborers

The report of the *Arbeiter Kranken Kassa* (laborers' sick benefit society) of Vienna, contains some interesting figures regarding the health of a fairly uniform group of earners. This society has 310,000 members, all living in Vienna. In January, the number of reported cases of illness was 11,469; only those incapacitated to work are reported to the registrar. Of these, 10 per cent. (1,138) were suffering from tuberculosis of the respiratory organs, 562 from influenza, 59 from pneumonia, 2,028 from other catarrhal affections of these organs, 592 had tonsillitis, 371 diseases of the circulatory system, 728 suffered from disease of the intestinal canal, including the stomach, 7,210 had rheumatic pain, and there were 1,746 cases of illness due to work (accidents called work injuries). The number of deaths was 319 in this one month; 48 per cent., or 157, succumbed to tuberculosis; 10 patients died owing to work injuries, 23 from neoplasms, 39 from heart disease. These figures are official, but it must be remembered that some of the better-paid wage earners prefer to call in their own private physician, as the contract physician is often so overburdened that he really has not much time for the individual patient; 1,000 to 1,500 persons are

allotted to each of these physicians, living often not in the same district. In busy times, there are from 20 to 30 visits to be made daily, besides about the same number of patients to be attended to in the office. Naturally, the physician is forced to be brief in his directions and his examinations. Taking these conditions into consideration, it may be assumed that 4 per cent. of the members of the societies are incapacitated monthly, or about 50 per cent. yearly.

Pharmacology

Kataplasma Kaolini, U. S. P., 1900

To the Editor:—Many things are revived, which already have passed in oblivion, and many things fall, which are now held in honor (Horace).[1] Dr. Herman Schelenz of Cassel, Germany,[2] has shown positively that earth and clay pastes and poultices have been used intermittently from the very earliest period in the history of medicine. The recent introduction into our pharmaceutical armamentarium of the earth poultices and clay pastes should not be regarded, therefore, in any way as a novelty.

In the course of the past few years, such preparations have been exploited broadcast and with vigor, and many medical journals are filled with almost frantic attempts to convince the profession that these remedies are *sine qua non* in a host of diseases of amazing variety, special reference, however, being shown for diseases ending in "itis." That the labors of these exploits were not wasted soon became evident. Physicians began to prescribe these preparations to an extent far beyond the dreams of their "originator;" indeed, the demand became so great that the committee for the revision of the Pharmacopeia of 1900, in its paternal effort to rescue the general practitioner from the "patent-medicine" prescribing habit, inserted an official preparation, which the physician could prescribe "ethically." Then a peculiar thing happened: instead of prescribing the official preparation, the physician continued to prescribe the proprietary, and if the pharmacist attempted to serve the official preparation in such circumstances the physician promptly cried "substitution," much to the pharmacist's discomfort. A natural consequence was that the official preparation was neglected, and now to all intents and purposes has ceased to exist. Instead of accomplishing their much-desired and worthy end, this committee therefore merely afforded additional advertising ammunition to the exploiters of these nostrums, who now boast that the U. S. Pharmacopeia—which incidentally Dr. Schelenz calls "an aristocrat among all the pharmacopeias"—advises the use of their preparations in the treatment of diseases, and that all these pastes are regarded as sufficiently worthy to be classed with such well-recognized and time-honored remedies as opium, quinin, arsenic, iron and mercury.

The widespread use of this preparation by physicians furthermore has resulted in an unforeseen and to the general practitioner disagreeable consequence, namely, that the layman has introduced these pastes into his own pharmacopeia to a surprising extent.

A few experiences with these preparations have not endeared them to me nor encouraged me in their use. One of my first observations was in the case of a child, suffering from bronchopneumonia, whom I found encased in a heavy layer of one of the best known of these western muds, and in whom the already seriously impaired respiration was further embarrassed by the weight of the clay poultice. Furthermore, the pores of the skin were closed and the paste interfered with the free access of air to the body, an important principle in the treatment of any disease, particularly in fever. I have also seen the same preparation applied to corns, bunions, ingrowing toenails, typhoid fever, spinal meningitis, miliary tuberculosis, varicose veins, rheumatism, appendicitis, swollen testicles and even to open wounds and ulcers. The clay paste covers a multiude of complaints. I have seen it cause severe irritation due to its most active principle, glycerin.

There is no valid reason whatever for the use of these clay preparations; the U. S. Pharmacopeia contains a sufficient number of counterirritants and rubefacients that are in every way superior to them. There is no need for a clay paste and no necessity for canonizing such a preparation by making the formula official.

A. A. HERZFELD, M.D., New York.

1. Multa renascentur, quæ iam cecidere, cadentque, quæ nunc sunt in honore.
2. Die Geschichte der Pharmacie, Julius Springer, Berlin.

How Testimonials Are Secured

An article by George Frank Lord on "Testimonials in Advertising" (*Printer's Ink*, Feb. 3, 1909), undoubtedly deserves the prize for a cynical unveiling of the unscrupulousness that underlies the modern advertising method. He supports the use of the testimonial on the following ground: "Until the evolution of a perfect man with infallible judgment and universal knowledge, we must all of us depend on the experience and opinion of others—and that is exactly what a testimonial represents." He then proceeds to demonstrate that that is exactly what a testimonial does not represent, in very many cases: "The average 'patent medicine' testimonial is genuine . . . because the 'patent medicine' ad. appeals chiefly to hypochondriacs who are not sick, but imagine they are when they read their 'symptoms.' The same ad. creates the sickness and effects a cure *à la* Christian Science. The purchase of the medicine is really unnecessary except from the advertiser's viewpoint."

Another instance of the value of the so-called experience and opinion of the testimonial giver is displayed in the following advice: "The best time to get a testimonial is shortly after the purchase is made, while the buyer's first enthusiasm is at its height. . . . Further, advantages resulting from the use of an article are not always permanent, and unless the testimonial is secured at the psychologic time it can not be obtained at all."

If the principles involved in the foregoing excerpts are not blankly dishonest, then we must confess that the meaning of the term dishonest is not clear to us. And yet they are the principles that are adopted in securing "patent medicine" testimonials.

Correspondence

A New Sign of Perforation in Typhoid Fever

To the Editor:—In THE JOURNAL, February 27, page 695, in the article entitled a "New Sign of Perforation in Typhoid Fever," the following statement occurs: "A small area of tenderness was found low down in the right iliac fossa. The patient was turned on his left side and in half an hour the area of tenderness had moved toward that side about two inches."

This seems such bad teaching that it should not be allowed to pass unchallenged.

Patients with perforation in typhoid fever die from general peritonitis. With the vast improvement in results from Fowler's position, based on Muscatello's finding as to regions of absorption, a surgeon of to-day can scarcely justify his position if he treats his patients otherwise. No one would dream of using Clark's position. It would seem equally indefensible to place the patient in any position whatsoever, merely to make him worse in order to prove the diagnosis. The position on which this "new sign" depends simply means spreading the septic material to the left side in order that peritonitis may occur there, and thus help in the diagnosis. Rather should it be laid down that in any case of suspected perforation the resident staff and the nurses must be instructed that their duty lies in a series of negatives, except that the head of the bed should be elevated. After that the patient must not be sponged, must not receive food, must not be moved, must not receive an enema, and must not be exam-

ined by any and every physician who happens to come to the hospital. One could not think of any worse treatment than that recommended, except it be giving a purgative or an enema or adopting Clark's position.

Without going into details in the diagnosis of typhoid perforation, I should like to say that the most essential point is to have trained observers who can detect the signs at the time of perforation. The sharp, stabbing pain is the chief feature, and if not taken into account at once by an observant resident physician, or an equally observant nurse, it will, in many cases, be lost entirely, for when the attending physician visits the bedside the patient has forgotten all about it. Then the diagnosis must rest largely on the spreading peritonitis.

As to whether or not the first sign mentioned has been noticed before, see the discussion on Dr. J. D. S. Davis' paper on "Treatment of Typhoid Perforations" which took place at the twenty-first annual meeting of the American Association of Obstetricians and Gynecologists at Baltimore, September, 1908, published in the *American Journal of Obstetrics and Diseases of Women and Children*, December, 1908, pages 1058-1060.

Throughout the whole realm of medicine we are often tempted to seek pathognomonic "signs," and in looking for these, many other very relevant, though singly minor, symptoms are lost sight of. With all the advancement in modern medicine, we err if we lack in close observation and expect to replace it with new devices.

JASPER HALPENNY, Winnipeg, Manitoba.

[The above letter was referred to Dr. Brown, who says:]

With regard to the sign to which objection is taken, I would refer Dr. Halpenny to the closing paragraph of the article. There I place the limit of time for observance of the sign as half an hour. I can see no reason why it is not better to allow the peritonitis to spread in a definite direction, which direction will help us in the diagnosis and at the same time tend to keep it from spreading upward or from spreading around the cecum into Morrison's space, and thence upward under the liver, than to allow it to spread in any direction than it may by chance take, or by placing the patient in the Fowler position to make it spread downward into the pelvis. Furthermore, I do not think that if the limit of one or two inches is observed the peritonitis will become uncontrollable in that direction (namely, toward the unaffected side), any more than it will in any other, provided immediate operation is performed.

With regard to the "series of negatives," I would call Dr. Halpenny's attention to the fact that with an estimated average of 25,000 persons dying annually in the United States from perforation in typhoid fever, in twenty-three years but 524 cases operated on have been reported. In my opinion the "series of negatives" has to a great extent been responsible for this.

In the discussion referred to, Dr. T. B. Noble of Indianapolis calls attention to the value of auscultation in the diagnosis of typhoid perforation and the sign which he describes is elicited in the following manner: He used an ampliphone, placing it over the area of greatest tenderness, and by making alternate palpation on either side he was able to elicit a friction sound such as one would get in a pleuritis. The same sound was produced by deep respiratory movements, which indicated roughened peritoneal surfaces passing over each other, the roughening due to an infection which came from an impending or already existing perforation.

The sound elicited by the method described by me is not a friction sound, but is similar to a very fine crepitant râle. Furthermore, the sign described by Dr. Noble necessarily presupposes that the surfaces must be in contact in order to produce the friction while in the sign described by me the surfaces are made to come into contact with one another by the dipping with the bell of the stethoscope.

As to the priority, the sign which I describe was first mentioned by me in a paper read before the Clinical Society of St. Luke's Hospital Staff, Utica, N. Y., in October, 1907.

With regard to the point of trained observers I would state that such a condition is much to be desired, and the fact that I might possibly help a little toward helping others to become "trained observers" was the reason I wrote the article.

General Practitioners and Simple Refraction

To the Editor:—There may have been some excuse in times past for the public's resorting to the old time spectacle vendor to "get glasses fitted"—at any rate for the larger part of the public, which is unable to pay high professional fees in addition to the expense of costly glasses. Now, however, that the optician has arrogated to himself a would-be professional status, accompanied, of course, with a more or less commensurate fee, the question insistently suggests itself: Should not the general practitioner be able to recognize and manage cases of simple refraction? The answer indisputably must be "yes," for various reasons.

First: The main reason for equipping family physicians with a working knowledge of simple refraction is that they may be able to do the medical practice now in the hands of opticians. While complicated refractive cases will often exceed the limitations of a family physician, no medical student or competent physician is so stupid that he can not learn to refract as well as, or better than the optician. Observations show us that some family physicians have mastered the art of simple refracting, so that we know others can do the same if they so desire. These will have the good sense to follow the custom established in other branches of practice, and seek the aid of a specialist in cases too intricate for their skill.

Other reasons why the family physician should possess working knowledge of simple refraction are: (1) That he may detect eye disabilities at their inception and so prevent the suffering sure to follow their neglect; (2) that no excuse may occur for patients heeding the specious promises of the optician's advertisements; (3) that the optician be relegated to his proper function, of selling glasses on physicians' prescriptions.

Second: A "working knowledge of simple refraction" by the family physician will (1) augment his income from enlarged service to patients; (2) strengthen his hold on families; (3) remove the necessity of his patients applying to a stranger for relief from eye disability; (4) broaden his intellectual capacity, increase his technical skill, and sharpen his power to penetrate the intricacies of other classes of cases. Such equipment enables him to appreciate better the difficulties of special ophthalmology, and fits him for cooperation with ophthalmologists in intricate cases.

Third: Without a "working knowledge of simple refraction" no family physician can meet his full obligations to the laity. Thus when his families consult him for ailments involving simple refractive defects, he must refer them to strangers or prescribe on a mere guess—either alternative is sure to disturb their faith in him. The intelligent student of social conditions may observe bright family physicians directing their warfare to an aching head, a distressed stomach, constipated bowels, or other organs, when the real source of the trouble is a defective eye; others, suspecting a defective eye, send the patients to a layman optician rather than to an ophthalmologist; still others consult an optician themselves; while multitudes sign petitions or write letters to legislatures, entreating them to legalize the illegal practice of ophthalmology by opticians, and, in divers other ways exhibit the legitimate fruits of an education defective in a "working knowledge of simple refraction." All these work untold harm to both the laity and the profession.

Thanks to a movement started last June by the Michigan State Medical Society, this question has passed its academic stage. The Michigan State Board of Registration in Medicine has notified medical colleges that, beginning next spring examination, all applicants for a license must demonstrate their possession of a "working knowledge of refraction," and that a failure to obtain 50 per cent. of possible standing will subject the applicant to refusal of license.

LEARTUS CONNOR, M.D., Detroit.

Carbolic Acid in Boils and Felons

To the Editor:—The treatment of boils, carbuncles, felons, in fact any local infection in its early stages by hypodermic injection of pure carbolic acid, has probably been used by others, but failing to find any mention of it in the literature, and having tried it on myself, I wish to report my method in order that it may be more widely known.

Having suffered from a boil on one hand and a carbuncle on the other, which ran their usual course, when others made their appearance, I was ready to experiment, and having tried without success to abort the first one by boring down into the center with a tooth pick wet with the acid, I went a step further with the second crop and injected the acid with a hypodermic syringe. To my great joy the pain instantly ceased (one must have boils to appreciate this), did not begin again, and the hard lump soon disappeared. Since then I have used the method sufficiently to satisfy myself and others - patients—that it is a cure.

The method consists in injecting pure carbolic acid into the center of the inflamed spot, taking pains to introduce the needle not at the most prominent point of the swelling, but rather to one side where the skin is sound and shows no signs of pointing. It is not necessary to count the drops, enough to make the tissue tense.

It stops the pain instantly, destroys the germs, and is absorbed so slowly that no harm comes from it.

H. D. GARDNER, Scranton, Pa.

An Eye Bandage

To the Editor:—In THE JOURNAL, March 27, page 1033, Dr. Morley describes "An Eye Bandage and Its Method of Application." This bandage has all the good qualities claimed for it, as a number of years' experience has convinced me. But it is only fair to state that it was invented many years ago by the late Dr. Russell Murdoch of Baltimore, and has been regularly used at the Baltimore Eye, Ear and Throat Charity Hospital. Dr. Morley will find Dr. Murdoch's description in the *Ophthalmic Record* of 1904, and will I am sure regret having described as his own something which belongs to another. HARRY FRIEDENWALD, Baltimore.

The Evolution of Refraction and Its Necessity

To the Editor:—In THE JOURNAL, March 27, page 1048, appeared a communication on the above subject by L. Haynes Buxton. Quoting from the third paragraph: "It was with much surprise that I read some of the statements contained in the paper by the late Dr. St. John Roosa, which appeared in THE JOURNAL, Feb. 13, page 543. My own personal and clinical experiences are so greatly at variance with the conclusions of Dr. Roosa that it is but just that they be recorded." This quotation, and, in fact, the whole letter, which gives admirable evidence of progressive thought conservatively expressed, so well represents not only my own views, but those of many other oculists, that it deserves a hearty endorsement. EDWARD LAUDER, Cleveland.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

ARKANSAS: Three boards, each at Little Rock, April 13. Regular Sec., Dr. F. T. Murphy, Brinkley; Homeopathic Sec., Dr. P. C. Williams, Texarkana; Eclectic Sec., Dr. A. J. Widener, Little Rock.

DISTRICT OF COLUMBIA: Washington, April 13-16. Sec., Dr. George C. Ober, 210 B St., S. E.

ILLINOIS: Northwestern University Bldg., Chicago, April 15-17. Sec., Dr. J. A. Egan, Springfield.

NEW MEXICO: Santa Fe, April 12. Sec., Dr. J. A. Massie.

OKLAHOMA: Guthrie, April 13. Sec., Dr. Frank P. Davis, Enid.

WEST VIRGINIA: Huntington, April 13-15. Sec., Dr. H. A. Barbee, Point Pleasant.

WISCONSIN: Park Hotel, Madison, April 13, Sec., Dr. J. V. Stevens, Jefferson.

COUNCIL ON MEDICAL EDUCATION

Fifth Annual Conference, held at Chicago, April 5

The Chairman, DR. ARTHUR DEAN BEVAN, Chicago, presiding

The fifth annual conference of the Council on Medical Education of the American Medical Association was held at the Auditorium Hotel, Chicago, April 5. In his address Dr. Bevan reviewed briefly the past history of the Council and called attention to the most marked improvements in medical education. The work of the past year was reported by the secretary, Dr. N. P. Colwell, who gave some of the conditions found by the inspection of medical colleges and also gave in detail the status of medical education at the present time.

Reports were then presented by the chairman of the ten subcommittees on medical curriculum, as follows:

1. ANATOMY, INCLUDING HISTOLOGY AND EMBRYOLOGY.—Dr. Charles R. Bardeen, Professor of Anatomy, University of Wisconsin, College of Medicine, Madison, Wis.
2. PHYSIOLOGY AND PHYSIOLOGIC CHEMISTRY.—Dr. Elias P. Lyon, Professor of Physiology, St. Louis University, School of Medicine, St. Louis.
3. PATHOLOGY AND BACTERIOLOGY.—Dr. William T. Councilman, Professor of Pathology, Harvard Medical School, Boston.
4. PHARMACOLOGY, TOXICOLOGY AND THERAPEUTICS.—Dr. Torald Sollmann, Professor of Pharmacology and Materia Medica, Western Reserve University, Medical Department, Cleveland.
5. MEDICINE, INCLUDING PEDIATRICS AND NERVOUS AND MENTAL DISEASES.—Dr. George Dock, Professor of Medicine, Tulane University of Louisiana, New Orleans.
6. SURGERY, GENERAL AND SPECIAL.—Dr. Charles H. Frazier, Professor of Clinical Surgery, University of Pennsylvania, Department of Medicine, Philadelphia.
7. OBSTETRICS AND GYNECOLOGY.—Dr. J. B. DeLee, Professor of Obstetrics, Northwestern University Medical School, Chicago.
8. DISEASES OF THE EYE, EAR, NOSE AND THROAT.—Dr. George E. de Schweinitz, Professor of Ophthalmology, University of Pennsylvania, Department of Medicine, Philadelphia.
9. DERMATOLOGY AND VENEREAL DISEASES.—Dr. William A. Pusey, Professor of Dermatology and Clinical Dermatology, College of Physicians and Surgeons, Chicago.
10. HYGIENE, MEDICAL JURISPRUDENCE AND MEDICAL ECONOMICS.—Dr. F. F. Wesbrook, Professor of Pathology and Bacteriology, University of Minnesota, College of Medicine, Minneapolis.

These reports recommended a curriculum which aggregated 4,400 hours. At a meeting of the chairmen held on the day preceding the conference, these reports had been compared, a few duplications of courses were eliminated, and the total hours for each section reduced as follows:

SUBJECT.	HOURS.
I. Anatomy, including histology and embryology	700
II. Physiology and Physiologic Chemistry, including 80 hours of Organic Chemistry	530
III. Pathology and Bacteriology	500
IV. Pharmacology, Toxicology and Therapeutics	240
V. Medicine, including Pediatrics and Nervous Diseases	890
VI. Surgery: General and Special	650
VII. Obstetrics, 180 hours, and Gynecology, 60 hours	240
VIII. Diseases of the Eye, Ear, Nose and Throat	140
IX. Dermatology and Syphilis	90
X. Hygiene, Medical Economics and Medical Jurisprudence	120
Total	4,100

These figures were voted to represent the maximum requirement of a medical curriculum covering four years of 32 weeks each of actual work. It was the opinion of those present that the curriculum should not be made a hard and fixed requirement with which all colleges should comply. Its chief value was considered to be in its suggestiveness and from the fact that it represented an exhaustive study by over 100 leading medical educators, representing all the subjects included in the curriculum.

Dr. George W. Webster, president of the Illinois State Board of Health, gave an address on "The Medical Curriculum from the Standpoint of the State Board."

Dr. Fleming Carrow, of the Michigan State Board of Registration in Medicine, gave an address on "The Character of the State License Examination." In this address and the discussion which followed, it was shown that the best means of differentiation between the graduates of schools of the "quiz compend" type and those which have been trained in laboratories, dispensaries and hospitals would be to give—in addition to written examinations—practical tests, wherein the applicant would be required to identify histologic specimens, urinary casts, bacteria, etc., under the microscope, or

to point out certain tissues on the cadaver or even to examine patients.

In a paper entitled "Some Results of Higher Standards of Preliminary Education," Dr. Richard H. Whitehead, dean of the Medical Department of the University of Virginia, gave the results of higher requirements in that school. While the increase caused a reduction in the number of students it greatly raised the average quality. He added that while the south had some serious educational problems to work out, the Council should not lower its standards on that account. The south needed the standard as a goal to be striven for. In conclusion, Dr. Whitehead said: "The day is not so very far off when there will exist the proper basis for high standards in medical education. Already the leaven of high ideals is working in at least three southern universities. And so, I say, do not worry about the south; it will work out its educational development in due time. In the meanwhile the Council can be of much service by stimulating, encouraging, helping—but not by lowering its standard."

Association News

RAILROAD RATES TO ATLANTIC CITY

Transportation Committee Announces Rate of One and a Half Fares for the Round Trip

The Transportation Committee announces that it has secured a rate of one and a half fares for the round trip to the Atlantic City session, June 7 to 12.

On a two cent basis, this rate is equivalent to the one fare rate on the old three cent basis. This rate applies to all parts of the United States, with the exception of the extreme western or Trans-Continental Passenger Association territory, for which a special rate has been made to the gate-ways of the Western Passenger Association territory, where the one and a half fare rate applies.

A special train (or more if necessary) has been arranged for from the Chicago district to Atlantic City, without change, via the Pennsylvania Lines. This is the only line reaching Atlantic City from the West without transferring and changing at Philadelphia. This train will leave Chicago Sunday, June 6, arriving at Atlantic City Monday, June 7.

A special train will be run by the Chicago & Alton from the West and Southwest, from Kansas City and St. Louis, and special sleepers by the Chicago, Milwaukee and St. Paul, from the Northwest to Chicago, connecting directly with the Pennsylvania Special, thus providing for all who wish the most direct routes and the best possible accommodations.

The dates of sale of the tickets have been arranged sufficiently early to accommodate those who wish to attend the special societies' meetings in advance of the American Medical Association.

M. L. HARRIS, Chairman.

NEW MEMBERS

List of new members of the American Medical Association for the month of March, 1909:

ALABAMA

Clayton, O. W., Sylvania.
Fuller, E. L., Parryville.
Goodloe, J. R., Demopolis.
Greene, P. F., Clayton.
Greer, W. H., Tuscumbia.
Hogan, R. E., Bessemer.
Inge, H. T., Mobile.
Reid, A. M., Florence.
Watson, C. M., Florence.
Williams, V. H., Calera.

ARIZONA

Rosenberry, A. J., Jerome.

ARKANSAS

Amis, J. C., Ft. Smith.
Baker, J. J., Magnolia.
Holt, C. S., Ft. Smith.

CALIFORNIA

Banter, L. A., Redding.
Card, C. W., San Francisco.
Cowan, A. B., Fresno.
Ellis, J. A., Alameda.
Gillespie, J. A., Kingsbury.
Frizell, J. P., Yreka.
Huntington, W. O., Oakland.
Johnson, E. E., Palo Alto.
Krull, Frank, Sacramento.
Lennon, M. B., San Francisco.
McClurg, Katherine, Oakland.
Molony, J. J., San Francisco.
Morris, Margaret M., Los Angeles.
Pitts, A. D., Point Arena.
Schulze, O. T., Napa.
Smith, A. M., Oakland.
Stewart, J. T., Los Angeles.
Thomas, H. G., Oakland.
Walker, B. F., Stockton.
Williams, F. H., Selma.

COLORADO

Agan, J. M., Pierce.
Bartelt, E. E., Lamar.
Bolton, L. C., Cedaredge.
Collins, E. W., Denver.
Copeland, W. C., Hotchkiss.
Crisp, J. D., Denver.
Crosby, L. G., Ouray.
Cummings, G. D., Florence.
Depeyre, L. N., Colorado Springs.
Garwood, H. G., Gorham.
Geith, C. R., Wellington.
Green, A. S., Denver.
Healy, M. D., Denver.
Howard, C. J., Boulder.
Lassen, Fritz, Pueblo.
Leinbach, R. C., Shoshone.
Yacoubi, H. B., Paonia.

CONNECTICUT

Bedford, A. L., Waterbury.
Chillingworth, F. P., Haddam.
Martelle, H. A., Hartford.
Simmons, W. N., Tolland.

DELAWARE

Carey, H. M., St. George's.

DISTRICT OF COLUMBIA.

Frankland, W. A., Washington.
Goodman, W. R., Washington.
Groover, T. A., Washington.
Hunt, P. C., Washington.
Jenner, N. R., Washington.
Kerr, H. H., Washington.
Magee, G. H., Washington.
Mason, E. L., Washington.
Riggles, J. L., Washington.
Roy, P. S., Washington.
St. Clair, F. A., Washington.
Wilkinson, W. W., Washington.

FLORIDA

Bouchelle, L. B., New Smyrna.
Halton, John, Sarasota.
Henry, H. W., Lake Weir.
McKinstry, Jr., J. F., Gainesville.
Roberts, J. L., Plant City.
Sandusky, C. M., Jacksonville.

GEORGIA

Beauchamp, J. C., Williamson.
Benedict, S. C., Athens.
Brown, V. L., Fort Valley.
Charlton, T. J., Salannah.
Glenn, R. P., Columbus.
Goolsby, R. C., Forsyth.
Johnson, J. E. L., Roberta.
McNeill, R. J., Danbury.
Miller, R. L., Waynesboro.
Moore, B. R., Temple.
Rawlings, Wm., Sandersville.
Wall, F. M., Dodge.

ILLINOIS

Carlisle, J. W., Robinson.
Carr, Jesse W., Sheridan.
Carter, A. R., Murphysboro.
Cheadle, C. M., Ashton.
Code, W. E., Chicago.
Everett, W. W., Highland.
Fast, H. D., Mackinaw.
Gibson, O. N., Eldorado.
Gunn, R. M., Montrose.
Hayden, A. A., Chicago.
Heitman, J. H., Tioga.
Hill, A. S., Chicago.
Kan, A. M., Chicago.
Kring, C. H., Livingston.
Laughlin, E. O., Paris.
Lillie, C. W., E. St. Louis.
Loeser, Wilhelm, Chicago.
Martin, W. B., Naperville.
Moessner, F. R., Chicago.
O'Reilly, W., Glasgow.
Reticker, J. K., Quincy.
Rockefeller, C. D., Bunker Hill.
Schneider, G. A., Chicago.
Watson, Walter, Mt. Vernon.

INDIANA

Baxter, J. W., Lanesville.
Bear, L. H., Vevay.
Bowers, H. C., Scircleville.
Brumbaugh, M. T., Foraker.
Caraway, S. H., Indianapolis.
Clokey, M. C., Huntington.
Coomes, M. J., Batesville.
Fauve, A. E., Fort Wayne.
Fermier, P. G., Leesburg.
Gabe, H. E., Indianapolis.
Gibbs, E. R., Greenfield.
Good, C. H., Warren.
Grim, Simon, Elberfelt.
Johnston, S. A., Indianapolis.
Kennedy, Frank, Goodland.
Kirkpatrick, J. C., Roll.
Kitchen, W. B., Indianapolis.
McPherson, S. L., Washington.
Moore, W. H. H., Lafayette.
Ostrowski, R. O., Hammond.
Powers, U. G., Albany.
Richardson, G. G., Van Buren.
Siders, W. B., Millersburg.
Smith, M. S., LaPorte.
Stone, C. E., Shoals.
Sturm, E. A., Jasper.
Swadener, E. L., Jeffersonville.
Wilcox, F. T., LaPorte.
Wolfe, F. E., Danesville.

IOWA

Aschenbrenner, C. F., Pella.
Bellinger, M. J., Council Bluffs.
Bruce, J. H., Dickens.
Canfield, H. W., Baxter.
Cobb, E. A., Harlan.
Gantz, S. B., Albia
Gibson, C. G., Sioux City.
Harris, G. W., Marshalltown.
Heidel, G. A., Muscatine.
Hart, U. L., Numa.
Johnson, E. M., Afton.
King, D. H., Batavia.
Kuhl, A. B., Davenport.
DeLespinasse, G.A.F., Orange City.
Logan, F. W., Fenton.
Merritt, E. A., Emerson.
Meyers, J. F., Elliott.
Noyes, A. A., Mason City.
Peterson, R. A., Swedesburg.
Pugsley, G. W., Moorhead.
Vorweck, A. H., Burlington.
Watson, E. J., Knowlton.
Whitwall, W. R., Hastings.

KANSAS

Bolton, J. W., Iola.
DeTar, M., Kinsley.
Fear, R. C., Gardner.
McDonough, W. C., Topeka.
Munford, R. H., Greeley.
Outland, J. H., Kansas City.
Reinemund, C. A., Junction City.
Sloss, H. J., Meade.

KENTUCKY

Adington, E. L., Rocky Hill Sta.
Baxter, W. E., Frankfort.
Blackford, C. M., Hickman.
Cassady, R. B., LaGrange.
Cornelius, Preston, Berea.
Craddock, J. W., Bonnieville.
Donan, Jr., D. C., Horse Cave.
Edwards, C. L., Sebree.
Fitzpatrick, Joseph, Bosworth.
Gambill, Jr., J. J., Blaine.
Gardner, W. H., Elizabethtown.
Hale, J. G., Harlin Springs.
Hester, J. H., Munfordville.
Hoffman, C. G., Louisville.
House, J. B., Scottsville.
House, T. B., Hopkinsville.
Irwin, W. E., Owensboro.
Jones, O. G., Smith Mills.
Keys, B. B., Murray.
Koehler, H. H., Louisville.
Land, J. A., Locust Branch.
London, Finis, South Union.
May, E. K., Allen.
Moore, C. H., Canmer.
Robertson, G. A., Louisville.
Simpson, H. B., Breeding.
Simpson, Sidney, Ashbrook.
Smith, Henry, Calhoun.
Stallard, J. M., Sparta.
Taylor, S. D., Beaver Dam.
Walton, J. P., Central City.

LOUISIANA

Allums, C. C., Ringgold.
Bailey, C. A., Athens.
Cole, C. G., New Orleans.
Gandy, E. R., Westlake.
Johnson J. R., Amite.
Jones, H. P., New Orleans.
Kelly, J. L., Rochelle.
Maestri, Angelo, New Orleans.
Mann, Gustav, New Orleans.
Prejean, L. A., Scott.
Robichaux, E. C., New Orleans.
Spurrell, H. C. H., New Orleans.
Stromer, George, Broussard.

MAINE

Card, A. M., Head Tide.
Sawyer, A. D., Fort Fairfield.
Small, A. E., Winter Harbor.

MARYLAND

Billingslea, J. S., Armiger.
Buell, M. C., Cumberland.
Burrow, W. T., Baltimore.
Coe, J. A., T. B.
Conroy, T. L., Frostburg.
Deetjan, Christian, Baltimore.
Fisher, W. A., Jr., Baltimore.
Hammerbacher, G. M., Baltimore.
Hodges, W. R., Cumberland.
Miller, Irving, Baltimore.
Norment, R. B., Baltimore.
Perrie, A. H., McKendree.
Schultze, Anna D., Baltimore.
Schwartz, W. F., Baltimore.
Stauffer, J. H., Baltimore.
Wilson, R. T., Baltimore.
Wyse, W. P. E., Pikesville.

MASSACHUSETTS

Allen, S. W., Boston
Baker, F. H., Worcester.
Barker, W. W., Boston.
Bloog, G. W., Fall River.
Burgess, C. J., Lawrence.
Clark, A. U. F., Westboro.
Curry, E. F., Sagamore.
Davis, M. F., Boston.

Ellis, A. H., North Dane.
Evans, M. H. A., Dorchester.
Fernald, G. G., Concord Junction.
Griswold, M. L., Uxbridge.
Heald, C. G., East Pepperell.
Hoban, J. J., N. Chelmsford.
MacLeod, N. M., Beverly.
McClusky, H. L., Worcester.
Myers, Elizabeth Y., Springfield.
Myers, Edmund, Boston.
Shattuck, G. C., Boston.
Wirth, E. P., Edgartown.

MICHIGAN

Burley, J. H., Almont.
Fox, T. G., Raber.
Galbraith, D. A., Lansing.
German, F. D., Franklin.
Heitger, J. D., Kalamazoo.
Landon, H. W., E. Lansing.
Lehman, C. G., Palmyra.
Pinkerton, W. J., Bessemer.
Southwick, C. R. W., Weidman.
Southworth, B. H., Schoolcraft.
Turner, R. J., Anchorville.
Waller, W. F., Frontier.

MINNESOTA

Beise, R. A., Brainerd.
Boeckmann, Ergil, St. Paul.
Cannon, Harry, St. Paul.
Cosman, E. O., Minneapolis.
Eshelby, E. C., St. Paul.
Halloran, F. J., St. Paul.
McGaughey, H. F., Winona.
Moir, W. W., McKinley.
Scherer, C. A., Ruthton.
Whipple, C. D., Minneapolis.

MISSISSIPPI

Howard, E. F., Vicksburg.
Patterson, C. W., Rosedale.

MISSOURI

Black, W. D., St. Louis.
Fienup, T. F., St. Louis.
Gettys, Henry, St. Louis.
Lyon, H. N., St. Louis
McNay, A. L., Pacific.
Riesmeyer, L. T., St. Louis.
Vitt, R. S., St. Louis.

NEBRASKA

Deemer, G. W., Chadron.
Meredith, G. W., Ashland.
Wekesser, H. P., Lincoln.

NEVADA

Wheeler, E. A., Goldfield.

NEW JERSEY

Banister, R. L., Newark.
Bidwell, H. G., Jersey City.
Britton, C. P., Trenton.
Dieffenbach, R. H., Newark.
Douglas, James, Morristown.
Frohwein, Ida L. Haverstick, Elizabeth.
Kirk, G. E., Camden.
Koppel, Joseph, Jersey City.
Larkey, C. J., Bayonne.
Lippincott, Jesse D., Newark.
MacMurrough, F. K., Jersey City.
Mayer, F. W., Jersey City.
McCroskery, Jr H., Weehawken.
North, James, Atlantic City.
Robinson, M. N., Newark.
Slack, C. M., New Brunswick.
Suydam, J. L., Jamesburg.

NEW MEXICO

Phillips, W. W., Roswell.

NEW YORK

Bandler, C. G., New York City.
Bird, J. T., New York City.
Bonetecow, R. B., Troy.
Burns, G. C. H., Central Islip.
Cary, W. H., Brooklyn.
Chapin, H. D., New York City.
Combes, A. C., Elmhurst.
Crumb, J. M., South Otselic.
Daniels, F. H., New York City.
Dietrich, A. E., Bay Shore.
Doescher, T. F., Albany.
Eising, E. H., New York City.
Fagan, P. J., New York City.
Fischer, R. M., Wanakena.
Folger, Rupert, Whitestone.
Gray, H. B., College Point.
Hadley, Erving, Willard.
Holdridge, W. H., New York City.
Jaques, A. D., Lynbrook.
Kurtz, H. T., Highland Falls.
Meagher, J. F. W., Brooklyn.
Meyer, D. W., Brooklyn.
Miles, C. C., Greenport.
Otis, J. C., Poughkeepsie.
Pierson, Helena B., Albion.
Pratt, W. H. B., Brooklyn.
Reynolds, W. A., Albany.
Rodgers, W. A., New York City.
Schumer, Henry, New York City.
Schweikart, F. J., Elmhurst.
Stoughton, H. W., Chateaugay.
Stuart, S. H., Hornell.
Sulzman, F. M., Troy.
Thomson, W. R., New York City.
Tieck, G. J. E., Brooklyn.
Walter, Josephine, New York City.
Welch, J. E., New York City.
Wendover, W. W., Warwick.
Whitmore, J. E., Buffalo.
Wolff, H. T., Yonkers.
Wood, W. C., Brooklyn.
Woodruff, W. S., Mt. Vernon.
Zwisohn, L. W., New York City.

NORTH DAKOTA

Busch, U. F., Fargo.
Eltun, F. J., Velva.
Rogers, G. F., Fargo.
Stone, E. C., Balfour.

OHIO

Brett, J. H., Cleveland.
Ellis, L. A., Van Wert.
Fisher, E. A., Yorkshire.
Hough, C. A., Lebanon.
Lanzer, A. H., Cleveland.
McGay, N. P., Shiloh.
O'Hara, P. H., Lewisburg.
Rike, W. H., Versailles.
Yaggi, H. K., Salem.

OKLAHOMA

Allen, J. R., Caddo.
Ruble, G. W., Wagoner.

OREGON

Dix, G. E., Marshfield.
Parker, H. G., Portland.

PENNSYLVANIA

Abbott, F. C., Philadelphia.
Ahlers, G. L., Allegheny.
Bausch, F. R., Allentown.
Beck, C. E., Portland.
Bliss, G. D., Altoona.
Bowles, L. C., Grampian.
Burheun, C. G., Jeannette.
Butler, T. J., S. Bethlehem.
Cawley, J. I., Springtown.
Christine, G. M., Philadelphia.
Clark, O. C., Worthington.
Cleaver, P. R., Johnstown.
Darlington, E. E., Harrisburg.
Darlington, H. H., Concordville.
Deehan, S. J., Philadelphia.
Everett, S. A., Freeland.
Fisher, Lewis, Philadelphia.
Fitzpatrick, I. L. J., Philadelphia.
Franklin, M. B., Philadelphia.
Gordon, J. K., Chambersburg.
Grube, J. M., Punxsutawney.
Guthrie, K. S., Philadelphia.
Hayes, T. R., Bellefonte.
Heed, C. R., Philadelphia.
Henderson, W. L., E. McKeesport.
Henry, T. J., Apollo.
Hill, G. A., Philadelphia.
Hower, H. V., Mifflinville.
Ingraham, E. R., Masontown.
Jenkins, J. C., Lititz.
Jones, C. J., Philadelphia.
Johansson, A. H., Warren.
Kennedy, G. W., Sharon.
Kevin, R. O., Philadelphia.
Landry, W. A., Chester.
Large, C. P., Meyersdale.
Lehr, M. D., Lykens.
Leonard, C. F., Philadelphia.
McCuaig, J. E., Erie.
McCune, C. E., Buena Vista.
McKeldin, R. A., Philadelphia.
Moffitt, G. R., Harrisburg.
Murfin, J. G., Philadelphia.
Nolan, T. F., Reynoldsville.
Ord, E. Y., W. Elizabeth.
Park, W. E., New Milford.
Patton, J. M., Vandergrift.
Quinn, L. W., DuBois.
Raiman, W. A., Swarthmore.
Reichard, N. W., Bangor.
Rohrbach, H. O., Freemansburg.
Ross, J. H., Philadelphia.
Rouse, W. J., Williamsport.
Ruch, C. F., Summit Hill.
Rupert, Mary P., Philadelphia.
Russell, H. B., Sheffield.
Schlemm, H. E., Reading.
Schneideman, Florence M., Philadelphia.
Seifert, F. R., Philadelphia.
Senn, John, Williamsport.
Shirey, C. A., Manor.
Shull, J. H., Stroudsburg.
Smith, L. C., Lawrenceville.
Stauffer, H. J., Jeannette.
Strickler, A. H., Waynesboro.
Thorp, J. S., Straight.
Troxell, W. C., Macungie.
Voigt, A. C., Hawley.
Wilson, O. H., Philadelphia.
Wagner, V. C., W. Pittsburg.
Woods, A. H., Bryn Mawr.
Whitall, J. D., Philadelphia.
Young, J. H., Lansford.
Zerbe, J. I., Polk.

RHODE ISLAND

Barrows, A. A., Providence.
Smith, S. N., Jr., Providence.

SOUTH CAROLINA

Eaddy, A. G., Timmonsville.

SOUTH DAKOTA

Moore, D. V., Yankton.

TENNESSEE

Ayres, J. C., Memphis.
Butler, H. T., Union City.
Harris, W. H., Pikeville.
Horton, J. W., Chattanooga.
Hayes, Jesse T., Oliver Springs.

TEXAS

Jackson, Eugene, Elmo.
Weeks, W. B., Maypearl.
Woolsey, Jefferson, San Antonio.

UTAH

Irvine, A. R., Salt Lake City.
Jorgenson, H. C., Payson.
Rich, W. L., Garland.

VERMONT

Tanner, J. D., Burlington.

VIRGINIA

Baker, B. N., Norfolk.
Black, A. J., Roanoke.
Howlett, H. H., Walkerton.
Jeffery, Aaron, Newport News.
Nowlin, J. B., Richmond.
Payne, R. J., Fredericksburg.
Rawls, D. S., Suffolk.
Scott, J. W., Gordensville.
Shipp, J. B., Norfolk.
Simms, T. J., Newport News.

WASHINGTON

Carlsen, E. L., Tacoma.
Nadean, Fonda, Seattle.
Petit, H. L., Chehalis.

WEST VIRGINIA

Peck, S. P., Hinton.
Stump, J. L., Charleston.

WISCONSIN

Gendron, A. E., River Falls.
Holz, A. P., Seymour.
Morris, E. K., Merrill.
Nutt, C. R., Plymouth.
Oatway, W. H., Lake Mills.
Schnetz, L. N., Racine.
Sharp, E. L., Fox Lake.
Smith, E. A., Milwaukee.

HAWAII TERRITORY

Hodgins, A. G., Honolulu.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish name or address will be faithfully observed.

HAINES' TEST FOR GLYCOSURIA

To the Editor:—Please give the formula, advantages, and disadvantages of Haines' reagent for the detection of glycosuria.

Z. Y.

ANSWER.—The formula of Haines' solution is as follows:

	gm. or c.c.	
Copper sulphate	2	or gr. xxx
Water	15	℥ss.
Glycerin	15	℥ss.
Liquor potassæ	150	℥v

Dissolve the copper sulphate in the water with heat, if necessary cool, and add the liquor potassæ previously mixed with the glycerin. The solution keeps well. For use, heat 4 c.c to boiling, when, if no change occurs, the reagent is known to be pure. Add to this quantity not more than 10 or 12 drops of urine and boil. If sugar is present in a quantity of clinical significance, a reddish or yellowish precipitate will occur. A whitish precipitate is merely the precipitated phosphates of the urine and has no significance.

The advantages of the reagent are that it keeps well and is sensitive enough to detect sugar in a quantity of urine so small that other reducing substances are not likely to interfere. It has also the advantage of requiring the use of but one solution.

Its disadvantages are the same as those of other copper solutions for detecting glucose. Cupric oxid is reduced by a number of substances normally or abnormally present in urine or artificially added. The chief of these are creatinin, uric acid, glycuronic acid, the pentoses, chloral, chloroform and formaldehyd. The first three are seldom present in sufficient amount to give a reaction when not more than ten drops of the urine are used in the test. Glycuronic acid and the pentoses seldom interfere, but if they are suspected the presence of dextrose should be confirmed by fermentation with yeast. When chloral, chloroform, or formaldehyd has been added as a preservative, that fact is generally known and should be borne in mind by the analyst.

CLEARING A HOUSE OF VERMIN—FUMIGATION BY CYANOGEN METHOD

To the Editor:—Please give in THE JOURNAL (1) the best way of clearing a house of bedbugs; (2) the technic and advantage of fumigating houses by the cyanogen method. P. G.

ANSWER.—1. Gasoline is the best agent for killing the adult bugs; but due regard must be had to its inflammable and explosive character. It is conveniently applied by means of a wash bottle fitted with a movable tip by which a fine stream of gasoline can be directed into the crevices in which the bugs secrete themselves. The rubber bulb of an atomizer can be attached to the mouthpiece of the wash bottle so that the pressure can be conveniently exerted by the hand. Corrosive sublimate is also recommended, especially for killing the eggs and larvæ, and may be applied by the same apparatus in the strength of an ounce of corrosive sublimate with an ounce of glycerin to the pint of alcohol. This solution and the gasoline can be emulsified by shaking so as to be applied at the same time. Repeated applications may be necessary to secure the desired result. Petro-

leum may be substituted for gasoline and when the amount used must be large would be much safer. Fumigation by sulphur dioxid has been recommended in cases in which it is not possible to make direct applications. This is probably the best method when a whole house is to be treated. Hydrocyanic gas is very fatal to the bugs, but is not to be recommended on account of the extreme danger of poisoning in handling it.

2. By the cyanogen method is meant the evolution of hydrocyanic acid gas. This is best generated by first preparing a diluted sulphuric acid containing 1.5 parts of sulphuric acid mixed with 2.25 parts of water, taking care to add the acid to the water in a non-metal vessel capable of withstanding the heat which will be caused. One part of the potassium cyanid should then be tied in a bag so arranged that it can be lowered into the acid by a cord passing out of the room. The operator should retire and then lower the bag into the acid. For plant fumigation about 1 ounce or 25 gm. of potassium cyanid per 100 cubic feet should be used. For room disinfection a greater amount is necessary. This gas is a fatal poison for all forms of animal life. Its extremely poisonous character makes great care necessary in handling it and almost forbids its employment about the household. It is of especial value in ridding greenhouses, granaries, etc., of insects, but is less useful as a disinfectant against bacteria. It has few advantages over sulphur dioxid in ridding a place of vermin, and its germicidal power is inferior to that of formaldehyd.

The Public Service

Army Changes

Memorandum of changes of stations and duties of medical officers, U. S. Army, week ending April 3, 1909.

Farr, C. W., capt., granted sick leave of absence to June 1, 1909.

Hopwood, L. L., 1st lieut., granted leave of absence for 1 month.

Brooks, W. H., capt., granted sick leave of absence for 1 month.

Truby, A. E., major, granted leave of absence for 2 months, about June 15, 1909.

Bispham, W. N., capt., granted leave of absence for 1 month.

Marrow, C. E., major, ordered to duty at the Presidio, San Francisco, at the expiration of the leave of absence heretofore granted him.

Miller, E. W., capt., ordered to duty at Fort Williams, Me., on the expiration of the leave of absence heretofore granted him.

Wilson, W. H., major, granted leave of absence for 1 month, 20 days.

McAndrew, P. H., capt., relieved from duty at Fort Slocum, N. Y., and ordered to Fort Mackenzie, Wyo., for duty.

Brooks, W. H., capt., relieved from duty at Fort Mackenzie, Wyo., and ordered to Presidio, San Francisco, Cal., for duty.

Wilson, W. H., major, relieved from duty at Fort Hamilton, N. Y.; will sail from San Francisco, June 5, 1909, for Philippine service.

Wilson, J. S., major, granted leave of absence for four months, when relieved from duty in the Philippines Division.

Mason, C. F., major, relieved from duty in the office of the Surgeon-General of the Army, to take effect May 1, 1909, and ordered to duty with the Isthmian Canal Commission.

Duncan, L. C., capt., relieved from duty at Fort Missoula, Mont., and ordered to sail June 5, 1909, from San Francisco for Philippine service.

Trotter-Tyler, Geo., M. R. C., ordered from Fort Adams, R. I., to Fort Howard, Md., for temporary duty.

Lemmon, Robt., M. R. C., ordered from Fort Howard, Md., to Fort Jay, N. Y., for temporary duty.

Campbell, G. F., M. R. C., relieved from duty at the Pacific Branch, U. S. Military Prison, Alcatraz Island, Cal., and ordered to Fort Wingate, N. M., for duty.

Anderson, E. A., M. R. C., when relieved at Fort Wingate, N. M., ordered to Alcatraz Island, Cal., for duty at the Pacific Branch, U. S. Military Prison.

Kieruff, H. N., M. R. C., relieved from duty at Fort Apache, Ariz., and ordered to Fort Missoula, Mont., for duty.

Waddell, R. W., dent. surg., granted leave of absence for 1 month, 18 days.

Carpenter, Alden, dent. surg., ordered to Fort Slocum, N. Y., for temporary duty.

Navy Changes

Changes in the Medical Corps, U. S. Navy, for the week ending April 3, 1909:

Connor, W. H., appointed acting asst.-surgeon from March 24, 1909.

Robbins, I. W., acting asst.-surgeon, ordered to duty at the Naval Hospital, Mare Island, Cal.

Public Health and Marine-Hospital Service

List of changes of stations and duties of commissioned and other officers of the Public Health and Marine-Hospital Service for the seven days ended March 31, 1909.

Young, G. B., surgeon, relieved as chairman of board of medical officers convened under bureau order of March 23, 1909.

Cofer, L. E., P. A. surgeon, relieved from temporary duty at Hygienic Laboratory and directed to proceed to Reedy Island Quarantine Station and assume temporary command.

Anderson, John F., P. A. surgeon, detailed to represent the service at the annual meeting of the American Association of Pathologists and Bacteriologists, to be held in Boston, April 8, 1909.

Boggess, J. S., P. A. surgeon, granted 1 day's leave of absence, March 28, 1909.

Creel, R. H., P. A. surgeon, detailed as chairman of board of medical officers convened under bureau order of march 23, 1909.

Roberts, Norman, P. A. surgeon, granted 4 days' leave of absence from March 28, 1909.

Preble, Paul, asst.-surgeon, on arrival of Asst.-Surgeon F. A. Ashford, directed to proceed to Baltimore and report to the medical officer in command for duty and assignment to quarters.

Kimmet, William A., acting asst.-surgeon, detailed as recorder of board of medical officers convened under bureau order of March 23, 1909.

Robertson, Herman, acting asst.-surgeon, granted 23 days' extension of leave of absence from Feb. 8, 1909, on account of sickness.

Stewart, W. J. S., acting asst.-surgeon, granted 7 days' leave of absence from March 26, 1909.

BOARD CONVENED

Board of medical officers convened to meet at the Marine Hospital, Port Townsend, Wash., March 26, 1909, for the purpose of conducting a physical examination of a captain of the United States Revenue-Cutter Service. Detail for the board: Surgeon W. G. Stimpson, chairman; P. A. Surgeon J. H. Oakley, recorder.

Health Reports

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended April 2, 1909:

SMALLPOX—UNITED STATES

Arkansas: Allbrook, Jan. 1-March 25, 40 cass.

California: Los Angeles, Feb. 27-March 6, 2 cases; Oakland, Feb. 28-March 7, 1 case; Sacramento, Jan. 1-31, 22 cases; Feb. 1-28, 7 cases.

Georgia: Macon, March 14-21, 1 case.

Illinois: Chicago, March 13-20, 2 cases; Danville, March 14-21, 1 case; Galesburg, March 6-13, 1 case; Peoria, Feb. 13-20, 24 cases.

Indiana: LaFayette, March 8-22, 5 cases.

Kansas: Kansas City, March 6-20, 12 cases; Topeka, March 13-20, 8 cases; Wichita, March 6-20, 5 cases.

Kentucky: Fulton, Feb. 1-22, 27 cases; Lexington, March 6-20, 2 cases; Newport, Jan. 20-March 20, 34 cases; Paducah, March 6-13, 2 cases.

Louisiana: New Orleans, March 6-20, 3 cases, imported; Winnfield and vicinity, Jan. 1-March 24, 33 cases.

Massachusetts: Boston, March 13-20, 2 cases; Lawrence, March 6-13, 1 case.

Minnesota: Minneapolis, March 6-13, 3 cases; St. Paul, Jan. 1-31, 37 cases.

Missouri: Kansas City, March 6-20, 4 cases; Rich Hill, Dec. 5-March 20, 5 cases.

Montana: Butte, March 9-16, 1 case.

Nebraska: Lincoln, Feb. 1-21, 8 cases.

New Jersey: New Brunswick, March 6-20, 2 cases; Perth Amboy, March 24, 18 cases; Plainfield, March 6-20, 3 cases.

New York: Buffalo, March 13-20, 1 case.

Ohio: Cincinnati, March 5-19, 19 cases; Columbus, Dec. 26, March 2, 14 cases.

South Carolina: Winnsboro, Feb. 21-March 21, 5 cases.

Tennessee: Knoxville, March 6-20, 5 cases; Murfreesboro, March 15-31, 1 case; Nashville, March 13-20, 4 cases.

Texas: El Paso, March 9-16, 3 cases; Fort Worth, Feb. 1-28, 3 cases; Galveston, March 5-12, 1 case; Houston, Feb. 28-March 13, 2 cases; Laredo, March 19, 1 case; San Antonio, March 13-20, 2 cases.

Virginia: Richmond, March 13-20, 1 case.

Washington: Spokane, March 6-13, 1 case; Tacoma, Jan. 24-Feb. 7, 11 cases; Mar. 7-14, 4 cases.

Wisconsin: Appleton, March 13-20, 1 case; La Crosse, March 6-20, 3 cases; Milwaukee, Feb. 28-March 20, 24 cases.

SMALLPOX—FOREIGN

Algeria: Algiers, Feb. 1-28, 20 deaths.

British Honduras: Stann Creek, March 4-11, 6 cases, 1 death.

Canada: Halifax, March 6-13, 2 cases; Yarmouth, March 21-27, 1 case.

China: Tientsin, Jan. 16-23, 4 cases, 1 death.

Egypt: Alexandria, Jan. 14-28, 6 cases; Cairo, Feb. 6-8, 68 cases, 33 deaths.

France: Paris, Feb. 27-March 6, 5 cases.

Great Britain: Bristol, Feb. 27-March 6, 5 cases.

Greece: Athens, Feb. 27-March 6, 1 death.

India: Bombay, Feb. 16-23, 24 deaths; Calcutta, Feb. 6-13, 171 cases; Madras, Feb. 13-19, 1 death; Rangoon, Feb. 6-13, 6 deaths.

Italy: General, Feb. 21-March 7, 14 cases; Florence, March 3-10, 2 cases; Naples, Feb. 22-March 6, 15 cases.

Japan: Kobe, Feb. 13-20, 4 cases, 1 death.

Java: Batavia, Feb. 6-13, 3 cases.

Portugal: Lisbon, March 6-13, 6 cases.

Russia: Moscow, Feb. 20-27, 32 cases, 5 deaths; Odessa, Feb. 27-March 6, 6 cases; St. Petersburg, Feb. 13-20, 7 cases, 1 death.

Siberia: Vladivostok: Feb. 4-14, 1 case.

Spain: Valencia: Feb. 19-26, 5 cases.

Turkey: Smyrna, Jan. 29-Feb. 26, 5 deaths.

YELLOW FEVER

Barbadoes: March 14-20, 2 cases.

Mexico: Mexcanu, vicinity, March 13-20, 2 cases, 1 death.

CHOLERA

India: Bombay, Feb. 16-23, 5 deaths; Calcutta, Feb. 6-13, 17 deaths; Rangoon, 7 deaths.

Russia: Charkov, March 10, 4 cases; Jaroslav, to March 7, 59 cases, 26 deaths; Romano-Borissglabsk, March 13, present; St. Petersburg, March 6-11, 43 cases, 15 deaths.

PLAGUE

Azores: Fayal, March 16, present; Terceira, Feb. 1-28, 15 cases, 5 deaths.

Chile: Iquique, Feb. 16, 14 cases, in lazaretto.

India: Bombay, Feb. 10-23, 94 deaths; Calcutta, Feb. 6-13, 12 deaths; Rangoon, 14 deaths.

Peru: General, Feb. 13-20, 80 cases, 40 deaths; Callao, 7 cases, 3 deaths; Lima, 5 cases, 3 deaths.

Marriages

A. O. WILLIAMS, M.D., to Miss Josie Martin, both of Providence, Ky., March 18.

SETH A. LIGHT, M.D., Lebanon, Pa., to Miss Mary Royer of Prescott, Pa., March 25.

J. B. SAMPSELL, M.D., Dayton, Ohio, to Mrs. Ethel Grubbs, of Columbus, Ohio, March 16.

WALTER C. WOODWARD, M.D., Seattle, Wash., to Miss Carrie Draper of Boston, March 25.

JOHN D. BUTZNER, M.D., Scranton, Pa., to Miss Elizabeth Robison, at Epsy, Pa., March 25.

Deaths

Phineas Sanborn Conner, M.D. Jefferson Medical College, Philadelphia, 1861; who served as assistant surgeon in the Army during the Civil War and until August, 1866, and was brevetted captain and major for "faithful and meritorious service"; a member of the American Medical Association; once president of the American Surgical Association, American Academy of Medicine, Ohio State Medical Society, and Cincinnati Academy of Medicine; during 1866 and 1867 professor of surgery in the Cincinnati College of Medicine and Surgery; from 1867 to 1869 professor of chemistry in the Medical College of Ohio; from 1869 to 1876, professor of surgical anatomy; later professor of clinical surgery and since 1907 emeritus professor of surgery and dean in the same institution; professor of surgery in Dartmouth Medical School, Hanover, N. H., for many years; surgeon to the Cincinnati and Good Samaritan Hospitals; a prolific writer on surgical topics; and a member of the presidential commission to investigate the question of foods supplied to soldiers in the Spanish-American War; died suddenly from cerebral hemorrhage at his home in Cincinnati, March 26, aged 69. Dr. Conner's last public appearance in Cincinnati was on March 20, when he was the first speaker at the memorial meeting of the Cincinnati Academy of Medicine for the late Dr. Thaddeus A. Reamy. A memorial meeting was held for Dr. Conner at the University of Cincinnati, April 1.

Robert Reyburn, M.D. Philadelphia College of Medicine and Surgery, 1856; a member of the American Medical Association; dean and professor of hygiene in the Medical Department of Howard University, Washington, D. C.; consulting surgeon to Providence Hospital; vice-president of the Woman's Clinic; and president of the Medicolegal Society; a surgeon in the U. S. Army from 1862 to 1867 and mustered out as brevet-lieutenant colonel; chief medical officer of the Freedmen's Bureau in 1871 and 1872; surgeon in charge of the Freedmen's Hospital from 1867 to 1875; who attended both President Lincoln and President Garfield in their last illnesses; died at his home in Washington, March 25, from kidney disease of long standing, aged 75.

Joseph Palmer Fessenden, M.D. New York Medical College, New York City, 1854; a member of the Massachusetts Medical Society; for 11 years postmaster, superintendent of schools, and a member of the board of aldermen and common council of Lewiston, Maine; for 35 years a member of the medical staff of Salem Hospital; and a member of the local board of United States Pension Examining Surgeons; died at his home in Salem, March 26, from pneumonia, aged 77.

Thomas J. Reed, M.D. Jefferson Medical College, Philadelphia, 1860; acting assistant surgeon, U. S. Navy, from 1860 to 1864; and then for a year assistant surgeon in the U. S. Army; a member of the Ohio State Medical Association and formerly president of the Northeastern Ohio Medical Association; died at his home in Massillon, from cerebral hemorrhage, March 27, aged 70.

Levi Farrow, M.D. College of Physicians and Surgeons, New York City, 1865; a member of the Medical Society of New Jersey; for 25 years secretary and once president of the Morris County Medical Society; and formerly president of the Tri-County Medical Society of Morris, Sussex and Warren counties; died March 21, from nephritis, at his home in Hackettstown, aged 64.

Harry Butler, M.D. University of Pennsylvania, Philadelphia, 1895; a member of the American Medical Association; surgeon to the nose and throat department of the Eastern Maine General Hospital, Bangor; eye, ear, nose and throat surgeon to the Children's Home; special United States Pension Examiner; died at his home in Bangor, March 23, from nephritis, aged 40.

John Patterson Wilson, M.D. College of Physicians and Surgeons, New York City, 1851; surgeon of General Custer's Brigade during the Civil War; health officer of Pontiac Mich., and a member of the school board for fifteen years; and once resident medical trustee of the Eastern Michigan Asylum; died at his home in Pontiac, March 26, aged 80.

Frank Baylor Hogg, M.D. University of Texas, Galveston, 1896; of Houston, Texas; a member of the State Medical Association of Texas; assistant surgeon of the First Texas Infantry, U. S. V., with service in Cuba during the Spanish-American War; died at the Baptist Sanitarium, Houston, March 21, from pneumonia, aged 37.

Ludwig M. Michaelis, M.D. College of Physicians and Surgeons, New York City, 1889; a member of the American Medical Association and New York Academy of Medicine; adjunct obstetric surgeon to Sydenham Hospital, New York City; died at his home from pneumonia, March 30, aged 45.

Samuel Reynolds, M.D. Jefferson Medical College, Philadelphia, 1865; of Reynoldsville, Pa.; formerly a member of the Medical Society of the State of Pennsylvania; died at Connellsville, March 24, while on his return home after undergoing operation at Mercy Hospital, Pittsburg, aged 65.

Daniel McLean Forman, M.D. College of Physicians and Surgeons, New York City, 1866; a member of the American Medical Association; surgeon to the Monmouth (N. J.) Memorial Hospital ever since its foundation; died at his home in Freehold, N. J., March 29, from heart disease, aged 64.

Joseph Clinton Hughes, M.D. Medical College of Ohio, Cincinnati, 1877; for several years coroner and health officer of Atchison county, Mo., and a member of the board of pension examining surgeons; of Rockport; died in a hospital in St. Joseph, March 20, aged 57.

John M. Rankin, M.D. Rush Medical College, Chicago, 1863; assistant surgeon of the Eleventh Pennsylvania Volunteer Infantry during the Civil War; a pioneer physician of Richland, Mich.; died at the home of his son in Kalamazoo, from septicemia, March 28, aged 76.

Franklin Pierce I. Clark, M.D. College of Physicians and Surgeons, New York City, 1876; a member of the Connecticut State Medical Society, and once president of the Danbury Medical Society; died at his home from pneumonia, March 24, aged 55.

Reynold Price Baird, M.D. Atlanta (Ga.) College of Physicians and Surgeons, 1902; a medical missionary to Brazil; died suddenly from cerebral hemorrhage on a train of the Southern Railway, between Atlanta and Jesup, Ga., March 10, aged 51.

Frederick P. Dorschug, M.D. Miami Medical College, Cincinnati, 1884; police surgeon of Cincinnati from 1882 to 1896; died at his home in Mount Auburn, Cincinnati, March 25, from locomotor ataxia, after an illness of twelve years, aged 48.

John Newland Starr, M.D. Rush Medical College, Chicago, 1873; a member of the Washington State Medical Association; formerly of Wilbur, Wash.; died suddenly from heart disease, at his home in Toppenish, Wash., in January, aged 69.

Hugh Finlaey Terry, M.D. Tulane University, New Orleans, 1902; while in a state of delirium, said to have been due to drugs or liquor, was shot and instantly killed by his brother at the family home in Dallas, Texas, March 25, aged 31.

Henry A. Hildreth, M.D. Eclectic Medical Institute, Cincinnati, 1873; of Bethlehem, N. H.; a member of the New Hampshire Medical Society; died at the home of his son in New York City, March 25, from diabetes mellitus, aged 58. We

Henry K. Macomber, M.D. New York University, New York City, 1867; a veteran of the Civil War, and for more than 30 years a resident of Pasadena, Cal.; died at his home in that city, March 23, from acute gastritis, aged 65.

Asa S. Linthicum, M.D. University of Maryland, Baltimore, 1852; formerly a member of the board of Commissioners of Anne Arundel county; died at his home in Jessups, Md., March 28, from cerebral hemorrhage, aged 78.

Gustav Hessert, M.D. University of Würzburg, Germany, 1858; for many years a member of the staff of the Cook

County and German hospitals; died at his home in Chicago, April 4, from cerebral hemorrhage, aged 73.

James O. Carter, M.D. Starling Medical College, Columbus, Ohio, 1860; formerly of Lincoln, Neb.; a surgeon during the Civil War; died in a hospital in Chicago, March 28, from myocarditis and arteriosclerosis, aged 76.

John William Smith, M.D. Cooper Medical College, San Francisco, 1900; of San Francisco; a member of the Medical Society of the State of California; died recently in Yuma, Ariz., from tuberculosis, aged 34.

Frank T. Kunker, M.D. Albany (N. Y.) Medical College, 1883; a member of the Medical Society of the State of New York; died at his home in North Chatham, March 25, from pneumonia, aged 51.

George W. Walls, M.D. Cincinnati College of Medicine and Surgery, 1882; a member of the Indiana State Medical Association; died at his home in Mitchell, from heart disease, March 20, aged 60.

G. W. Williams, M.D. Louisville Medical College, 1875; for many years a practitioner of Eddyville, Ky.; died at the home of his daughter in Paducah, March 22, from cerebral hemorrhage, aged 78.

Medical Economics

POSTGRADUATE COURSE FOR COUNTY SOCIETIES

DR. JOHN H. BLACKBURN, DIRECTOR
BOWLING GREEN, KENTUCKY

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

Ninth Month.—Second Weekly Meeting

FORMS OF INSANITY[1]

MANIA AND MELANCHOLIA

MANIA.—Symptoms: Mental symptoms, prodromal period of depression, stage of exaltation, slight or marked, emotional, loquacious, increased flow of ideas, motor agitation, incoherence, acute delirium, occasional hallucinations, expansive delusions, sexual excitation, insomnia. Convalescence may be stage of depression, differentiate circular insanity. Physical symptoms, temperature at times, pulse, absence of fatigue, increased saliva, gastric disorders, urinary changes.

Varieties of Mania: Mild, grave, acute delirious, reasoning, hallucinatory, acute, subacute or chronic, periodic, epileptic, alcoholic, puerperal, etc.

Course of Disease: Recovery, death, secondary dementia, secondary paranoia, chronic mania.

MELANCHOLIA.—Etiology: Age, sex, heredity, physical ill-health, mental stress, pregnancy and lactation, climacteric, alcoholism.

Symptoms: Mental symptoms, varies from dejection to profound depression, may be agitation, diurnal oscillation of depression, precordial distress. Apathetic variety. Acute hallucinatory variety. Slowing of thought processes important symptom. Delusions of persecution, having sinned, poverty. Motor symptoms: motor inhibition (apathetic variety) or agitation (hallucinatory variety), "catatonic rigidity." Suicidal tendencies frequent. Self-mutilation. Physical symptoms: pulse, respiration, sleep, gastrointestinal disorders.

Varieties: Acute, subacute and chronic; melancholia passiva, m. attonita, m. agitata; acute hallucinatory, hypochondriacal, catatonic, periodical, etc.; senile, puerperal, etc. Course: Slow progress, gradual recovery, months or years. Terminates in recovery (90 per cent.), recovery with defect, death, secondary dementia, chronic melancholia, secondary paranoia.

CIRCULAR INSANITY

SYNONYMS.—Alternating insanity; insanity of double form; insanity of double phase; cyclic psychosis.

ETIOLOGY.—Heredity, trauma to head, alcoholism, hysteria, epilepsy. Age, sex.

SYMPTOMS.—Melancholic period, degrees and varieties of depression, interval. Maniacal period, variations. Course and terminations.

DIAGNOSIS.—Differentiate from mania or melancholia with reactive phase.

MANIC-DEPRESSIVE INSANITY (Kraepelin)

The classification of the psychoses, mania, melancholia and circular insanity, according to Kraepelin, is as follows:

1. Manic type of manic-depressive insanity. Simple, delusional and confusional.
2. Depressed type of manic-depressive insanity. Simple, delusional and stuporous.
3. Mixed type of manic-depressive insanity. Circular type. Psychomotor excitement with emotional depression. Psychomotor inhibition with emotional exaltation.

Etiology and pathology.

1. Church and Peterson: Nervous and Mental Diseases.

Society Proceedings

COMING MEETINGS

AMERICAN MEDICAL ASSOCIATION, ATLANTIC CITY, JUNE 8-11.

Alabama, Medical Assn. of State of, Birmingham, April 20-23.
American Therapeutic Society, New Haven, Conn., May 6-8.
Association of American Physicians, Washington, D. C., May 11-12.
Arizona, Medical Association of, Prescott, May 19-20.
Arkansas, Medical Society of, Pine Bluff, May 18-21.
California, Medical Soc. of State of, San Jose, April 20.
Connecticut State Medical Society, Hartford, May 26-27.
District of Columbia, Medical Assn. of, Washington, April 27.
Georgia, Medical Association of, Macon, April 21.
Illinois, State Medical Society, Quincy, May 18-20.
Iowa, State Medical Society, Dubuque, May 19-21.
Kansas, State Medical Society, Emporia, May 5-7.
Louisiana, State Medical Society, New Orleans, May 4-6.
Maryland, Med. and Chir. Faculty of, Baltimore, May 13-15.
Mississippi State Medical Association, Jackson, April 13.
Missouri, State Medical Association, Jefferson City, May 18-20.
Montana, State Medical Association, Missoula, May 12-13.
Nebraska, State Medical Association, Omaha, May 4-6.
New Hampshire, Medical Society, Concord, May 13-14.
North Dakota, State Medical Association, Fargo, May 11-12.
Ohio, State Medical Association, Cincinnati, May 5-7.
South Carolina Medical Association, Summerville, April 21.
Tennessee State Medical Association, Nashville, April 13-15.
Texas State Medical Association, Galveston, May 4-6.

AMERICAN ACADEMY OF MEDICINE

Second Mid-Year Meeting, Held in Chicago, March 25, 1909

(Continued from page 1136)

The Underlying Principles Permitting Advanced Standing in a Medical College

DR. CHARLES MCINTIRE, Easton, Pa.: In the arrangement of studies for the medical course in the great majority of schools considerable time is given to subjects of general science as a foundation to the application of these sciences to medicine. Under either, the first degree is required for admission as in the medical schools of the Johns Hopkins type, or these subjects of general science are omitted from the medical course and required as premedical studies. The claim of medical teachers that general science subjects should be taught from the start with medicine in view by medical men in medical colleges, and not in the broad manner tending to a liberal education, must be recognized. In this connection one should note: 1. All medical teachers do not accept this conclusion; some excellent medical colleges employ science teachers who are not physicians. 2. Other motives than the future welfare of the student may have assisted some in arriving at this opinion. The longer attendance of the student increasing the number of names in the catalogue and incidentally the fees is one of the possibilities. Fairness compels the statement that the same motive might have equal influence with those who desire to retain the student in the literary college. 3. While the elementary study of any science with the single purpose of developing its appli-

cation to the art or profession elected by the student may make him more proficient in the applied science so far as it is taught him, it also makes initiative less probable and prevents a just appreciation of new methods or of alleged advances in that science. 4. Is it not true that specialism is running riot in educational processes at the present time, not alone in medicine, but everywhere? Would it not be better for the man and for mankind ten years after the doctorate has been bestowed should he have the broader foundation even at the expense of some finish in the superstructure? We must recognize three classes of students in our colleges: Those who will plan to enter the postgraduate medical school, as Harvard or Johns Hopkins; those who will demand a special course chiefly of those subjects fitting them for entrance on the medical course, and those who may or may not be induced to take the first degree, depending on individual circumstances. Many literary colleges are in the habit of accepting students for their freshmen classes when certified by certain preparatory schools, but do not accept such certificates from other preparatory schools. Again, in many institutions, a student coming from another college will be received into temporary standing on college comity, his final standing being determined after the student shows what is in him. Some plan combining these questions should be devised whereby certain institutions could be privileged to certify their students to the medical college. Should the literary college abuse the privilege, it can be withdrawn. A student admitted on college comity would not be given standing at once as a member of the second year class, although he would be permitted to take the subjects for the second year, or a combination of studies from the first and second year, omitting those that he has already gone over. His work in the laboratories and in the recitation room for a definite period, until the mid-year examinations for example, will give ample opportunity for the faculty to ascertain his ability. They will be able to determine (1) whether it will be possible for him to continue in advanced standing or not, and if the degree of possibility is sufficient to make it desirable for him to do so; and (2) if it be desirable, his conditions, if any. If he be admitted to the second year with conditions, all conditions belonging to the first year must be removed by the end of the year before he can enter on the third year. Of course, any conditions for second year subjects should be governed by the same rules as apply to his classmates who have taken the first year.

As many medical schools are now organized, this plan would permit most of the students pursuing biologic electives in the better equipped colleges to save a year in the two courses without lowering the requirements in any way. At the same time, by the control of the individual, it would eliminate those who are not fitted for this condensation of courses. There are evidences of changes in the medical curriculum which may prevent the working of the plan as detailed. Should these changes result in a medical course of five years, the plan will permit the condensed course to consume but eight years in place of nine. It is worthy of discussion, whether it would not be better for the community to make such a plan possible rather than to begin specializing too early as some of the proposed changes in lengthening the medical course might do. A student who has completed his undergraduate course probably will be a better trained man after three years in medicine in such a school than his fellow students would be with four years of medical study following a less thorough preliminary training. Besides, the possessor of a first degree would not be apt to select the school of this standing, unless he failed to keep up somewhere else, when the very change would arouse suspicion. In view of the distrust that exists in some quarters, it might be politic, should any plan for comity be adopted, to have a confederation of institutions voluntarily placing themselves under the oversight of some organization entirely independent of them and whose character and reputation would insure that the oversight would be real and not perfunctory merely. In the procession and progress of events a new educational system will be evolved of necessity, and the present haphazard condition, misnamed system, will be replaced by one where the first degree will be bestowed at the time when the required studies for a liberal culture end, and before the proper time for electives begin.

Preliminary and Graduation Requirements for the Medical Course in Terms of Work Done

DR. EDWARD JACKSON, Denver: In this paper I discuss the practicability and importance of having a recognized standard of the work to be done, apart from the time required by the average student to do the work. Some conception of the purpose and work to be done must be formed in the mind of the educator or legislator, along with some understanding of the capacity of the average student and the time properly to be spent in education before any rational time standard can be carried out. However, the time standard is in general use in colleges, college associations, state laws and the requirements of boards of medical examiners. It has in one direction great elasticity; it permits one teacher to use the time in teaching certain parts of his subject; while another can select quite different parts of the subject on which to instruct his students. But in another direction it is undesirably rigid. As applied to the medical course it may compel the student to pass four years in a medical college, when a part of the subjects studied there could be better studied in some other institution. It compels the student who, by reason of more extended and thorough preliminary study, could complete the medical course in three years, to spend four years in a medical school, part of the time wasted in going over work which he has already been taught, perhaps more thoroughly. It prevents students from taking a combined general academic and medical course which would better fit them for their life-work unless they are willing to devote unnecessary time to it, or take the combined course in an institution that can give both courses. The framing of a standard curriculum in terms of work to be done is quite practical. Something of the sort is done by everyone who writes a text-book, or lays out a course of instruction for students, or examines students, without any definite idea of what they should know after having conformed to a given time requirement. Such a standard could be given all necessary flexibility by provision for electives, and also variations at the judgment of the instructor. It could be revised by a representative body as frequently as might seem desirable. The discussion as to what it should include would have great value in bringing about a better general understanding of what the preliminary training and professional education of the physician ought to be; would promote professional unity, and furnish a rational basis for the plans of educators.

Discussion on Papers of Drs. McIntire and Jackson

PROF. ROBERT N. BLAKE, South Bethlehem, Pa.: Speaking entirely from the point of view of one connected with a college that is detached from a medical school and without any affiliation with it, Dr. Jackson's paper is suggestive. It shows the spirit of unrest which is at work in medical schools as well as in literary and college circles. The subject under discussion is really the complete training of the physician. The physician occupies a unique position among men. He comes into closer touch with the people than any other professional man. In Germany, the work of the physician and his services are rapidly taking the place of the work of the minister or professor and his services, in so far that one is declining and the other rising. This conception of the value of the work of the physician has been re-emphasized recently in our own country in a report by President Pritchett of the Carnegie foundation, under the heading, "The Profession of Medicine versus the Business of Medicine." The physician, above all men, should be adequately trained, not only in those sciences which deal with health and disease, but in such a way as to make him a broader, a more cultured, sympathetic, humane man, and the question of whether his education shall cover a year or two more is one of secondary importance.

PROF. MELVINE A. BRANNON, University of North Dakota: There has been great improvement in the actual requirements, but there is need of continued progress, and this conference is one of the agencies through which the needed progress should be secured. Manifestly, the time element is not a satisfactory standard alone for measuring work. This is recognized in manufacturing and business. Piecework of a certain quality is usually demanded as a companion of time standards. If this is practical in material matters, it would seem that a test of efficiency should accompany the time standard in the progress of activities that are far less tangible, such as training the mind and developing character. In order to secure proper standards for training physicians of the highest possible efficiency, it is necessary to recognize and to deal with certain obstacles which oppose or seriously hinder the desired changes. In the first place, we have no central, unifying agency. The various state boards of medical examiners have approached such an authority in so far as they have become reciprocal, but reciprocity embraces comparatively few states at present. The American Medical Association has done much in the movement of advancing and unifying the educational requirements of medical colleges. Notwithstanding all this, a wide variation in content of the work is offered in the preliminary and graduation requirements of medical colleges. A serious difficulty in the way of standardizing and securing actual requirements both in the preliminary and professional work of medical schools is the competition for students. Undoubtedly, the proprietary medical schools have been the great offenders in this regard because their continuance depended on the fees received from students. However, I do not believe that all state schools are free from this unhealthy competition for student attendance. To quote Dr. Pritchett: "Medical education in this country is in a low state, and this is due in a large measure to the rivalries of the various medical sects, each clamoring for a separate medical school and for special privileges in each state. New York has solved this question by refusing to recognize any sect standard. Just as soon as the same educational standard is required of all medical schools, it becomes a matter of small moment whether they call themselves allopaths, homeopaths, osteopaths, or adopt some other name from medical sectarianism. The Council on Medical Education of the American Medical Association has most wisely taken the position, that so long as a medical college will hold high standards, the Council will recognize it without regard to the particular name it chooses to take. And I venture to repeat the statement that true college standards do not mean necessarily the possible academic requirements as printed in the catalogue. They mean reasonable standards, honestly lived up to."

There is no question but that other elements than time should enter into the standardizing of preliminary and professional work in medicine. The difficulties of having no central authority, no general coordinating agent, excessive competition for students, and misleading outlines of courses in college catalogues, together with the distractions of athletics and social life—the public are only partially informed in respect to the pressing needs of medical training, and the relative merit of medical schools—all these are real and formidable obstacles to the desired progress. It is pertinent to observe that each of these obstacles is also a primary reason for standardization in the terms of work as well as time.

DR. WARREN B. HILL, Milwaukee, Wis.: The paper of Dr. Jackson is particularly timely because of the fact that in all the work we have been doing in the last decade toward elevating the standard of education in medicine and in bringing order out of chaos, we have failed to establish a criterion of accomplishment, and have emphasized rather the length of time that was necessary for the average student to reach this point, and the general equipment that was necessary instead of looking forward to and establishing a standard to which all people must conform. And we would not have come to this question at all if it were not for the fact that there has been a conflict of interest between the university medical school and the university school of letters and science and the smaller colleges, in which the smaller colleges, the independent colleges, are demanding credit not only for scholastic training, but for time as well. Dr. McIntire has called attention to the fact that the student is entitled to credit for what he has done in the college of arts, and yet we are confronted by the fact that we have a state board which says, "Thou shalt not or thou shalt," and I think it would be well for us to consider the state board as a unifying agent, because, after all our deliberations, we must come back to the fact that the state board is the unifying agent in this matter. But let us require of the state boards that they give better examinations. In examining senior students in medical colleges, we require two weeks, yet state medical examining boards do it in two days without having any knowledge of the students beforehand. Let us require that they take sufficient time to examine the product, and that they shall examine the students in a practical manner.

DR. H. C. TODD, Epworth University, Oklahoma City: I do not believe that the entrance requirements to a medical school should be based on graduation from any school. I believe they should be based on the amount of work done. We are thrown on the old time-honored system of examination when it comes to the question of preliminary requirements of students for entrance to medical schools, and if we could decide on some method of examination we would solve a great deal of the difficulty that we are now meeting.

DR. ARTHUR DEAN BEVAN, Chicago: The discussions to-day show one thing very clearly, namely, that the university, in order to have a complete and well-rounded course in every sense, needs a well-equipped medical department; and I think every medical school, on the other hand, needs to become a part of a complete, well-rounded university. The solution of this entire question of whether we are to have a six, a seven, or an eight-year course, seems to depend on the fact that eventually every medical school that will do good work and survive will become in this country, as in Germany, the medical department of some strong university.

Medicolegal

For What Physicians Called as Witnesses May and May Not Charge

The Kansas City Court of Appeals says, on the second appeal of Burnett vs. Freeman, that it held on the first appeal "that a witness called to testify as an expert, whether as a physician, or in any other branch of knowledge, may be compelled to state his opinion, on hypothetical or other questions involving his professional knowledge, without compensation other than the witness fee taxed to the ordinary witness." And, further, the court held that public policy forbade him from increasing his fees for such services by contract with the party who called him. But the court said that a professional man, summoned to testify as an expert, can not be required to specially prepare himself for that particular case, and may make such preparatory service the subject of a valid contract for compensation.

On the new trial awarded, the plaintiff, a practicing physician, endeavored to bring his cause of action within the scope of this rule. His testimony was: "I saw I was getting into something that I had not anticipated, where I would have to give extra services, and I made the statement that if I had to go to court on this matter that I would charge him $25 if I were put on the stand and not kept over an hour. If I were detained longer than that, I would charge $50 for my services." This, however, was nothing but an agreement for extra compensation for the service of attending court as a witness, and as such was void under the principles and rules applied in the first decision.

It was permissible for the plaintiff to contract with his patient that he should be paid for his services in making ex-

aminations of her injuries and in holding professional consultations with ner and her husband, but it was not permissible for them to make the payment of such charges, or their amount, dependent on the contingency of the plaintiff being required to testify in the lawsuits. The plaintiff's duty as a citizen compelled him to appear as a witness, and give testimony without other pay than fees allowed by law, and he should not be permitted to evade that duty by the palpable excuse of a contract for a contingent fee.

Dying Declarations Obtained in Abortion Case as Condition to Rendering Aid

The Court of Criminal Appeals of Texas says, on the appeal of Jackson vs. State, that the Texas statute requires that a dying declaration, to be admissible in evidence, must be freely and voluntarily made. In this case it appeared that the girl on whom it was charged that a criminal abortion had been performed was suffering acutely, giving loud and vociferous exclamations of pain, and expressing the opinion that she was going to die. Under this condition of things, with her mind influenced in this way and by her pain, two physicians informed her that they would not do anything for her unless she told them about how her trouble came about and who performed the operation.

The testimony raised the issue that the dying declaration was not voluntary, but by overpersuasion, or duress, for that the evidence of the two physicians showed that they had declined to treat or relieve the declarant of what she thought was her dying condition, unless she gave the name of the party who had operated on her. This sufficiently presented the question, so as to require the court to submit the issue to the jury as to the condition of her mind at the time, and if they should find that she was under duress or overpersuasion, or not under a sense of impending death, then they should disregard her statement in arriving at a verdict.

In discussing parts of an instruction given to the jury, the court says that if the defendant appealing was guilty of a criminal abortion, there was no excuse for this, nor was there any justification; and certainly from no standpoint could there arise the question of "self-defense."

Defect in Registration Law and a Failure of Physician to Comply Therewith Not Punishable

The Supreme Court of Wisconsin says, in Brown vs. State, that the effect of chapter 469 of the Laws of 1907, now designated as section 1022, subdivisions 1 to 59, inclusive, of the Statutes of Wisconsin, was to create a state bureau of vital statistics, with local registrars, etc. The only provision for registering physicians to be found in the act is subdivision 19, which requires the registering to be done on or before Oct. 1, 1907, and contains no requirement whatever that a physician register thereafter, though by implication it may so permit. By the last section the act did not go into effect until after Oct. 1, 1907. There was therefore not until October 2 any "local registrar" in existence, and a compliance with the only command of the statute with reference to registration was impossible.

It is a most fundamental canon of criminal legislation that a law which takes away a man's property or liberty as a penalty for an offense must so clearly define the acts on which the penalty is denounced that no ordinary person can fail to understand his duty and the departure therefrom which the law attempts to make criminal. One can not be said to willfully violate a statute which is so contradictory or blind that he must guess or conjecture what is his duty thereunder. Under the pre-existing laws the relations of the physicians were with different local officers, largely with the register of deeds; in some cases the city clerks. Must a physician at his peril guess that when the legislature ordered him to file with a certain state officer, and he found that impossible, they meant that he should file with the register of deeds? The solution of such conundrums can not be imposed on individuals at the risk of criminality if they make a mistake. Because this statute made impossible compliance with the words of subdivision 19, and, while registration has been possible and permitted since, there is no word in the statute requiring it, the court holds that the defendant (Brown) was not shown to have willfully failed or neglected to register in breach of the command of the statute.

Turning to the charge that the defendant willfully neglected to file such a certificate of birth as the statute commanded, the court is convinced that his conduct evinced no such state of mind as the word "willfully" in its legal meaning implies. The voluntary effort to perform his duty by making certificate on the blanks which had been supplied him by the public officer, and the offer to comply with new regulations implied by his request that new blanks therefor be sent him, together with other circumstances, made plain that there was mere inadvertent omission of a required act in the sincere attempt to perform his duty as he understood it.

Wherefore, the court reverses a judgment of conviction in this case for failure to register and to file a certificate of birth, remanding the cause to the trial court with directions to dismiss the complaint.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

Medical Record, New York

March 27

1 *Three Hundred Cases Treated with a Culture of Lactic Acid Bacteria. C. E. North, New York.
2 Direct Blood Transfusion—Technic and Indications for Use. A. A. Berg, New York.
3 *The Roentgen Ray and the Etiology of Cancer. W. H. Dieffenbach, New York.
4 Two Unusual Cases of Influenza-Pneumonia. R. Floyd, New York.
5 Reduplication of the Tibia. J. B. Bissel, New York.

1. **Lactic Acid Bacteria.**—North reports the results of himself and about forty other physicians who have been trying the effects of the use of lactic acid bacteria in various forms of bacterial disease. This practice is based on the antagonism between lactic acid bacteria and some micro-organisms of the putrefactive and pathogenic species. The organism used was the *Bacillus bulgaricus*, cultivated in a medium of broth containing calcium carbonate. He describes the preparation of the medium and the cultivation of the bacillus. If necessary, the diseased surfaces are first cleansed with warm saline solution, but antiseptics must not be used. A syringe or spray is used, the broth culture being injected in its full strength. The dose varies according to the extent of the inflammation. The conditions in which it has been advantageously used are atrophic rhinitis, acute rhinitis (including coryza), ethmoiditis, disease of the antrum, chronic rhinitis, hay fever, cystitis, and certain surgical and dental conditions accompanied by suppuration. The effects were temporary in tuberculous sinuses, and in cystitis and leucorrhea were not uniform. In gonorrheal ophthalmia the results were good, as also in conjunctivitis, both pneumococcus and diplobacillary. North writes conservatively, but concludes that a few things have been learned by the work that may be more positively stated and seem to warrant a further study of the treatment. These things are that:

1. The bacillus of Massol can be grown abundantly in dextrose bouillon by the addition of lumps of calcium carbonate.
2. The use of these cultures as a wash or spray on inflamed surfaces or cavities often diminishes the discharge on such surfaces or cavities.
3. The use of these cultures often diminishes odor caused by putrefaction.
4. The treatment sometimes reduces swelling, especially in the erectile tissues of the nose.
5. Both acute and chronic inflammation caused by infections sometimes appear to be checked when their seat can be reached by an injection of these cultures.
6. The use of the cultures seems to be accompanied by no special danger and they cause no irritation.

3. **The Roentgen Ray and Cancer.**—Dieffenbach reviews the various theories as to the etiology of cancer and concludes:

Neoplasms are due to interference with normal cell reproduction induced through trauma, pressure, severe inflammations, or constant irritations; these factors act on cell proliferation by producing abnormal cells, which, in turn, if the original irritating status is maintained, again generate cells of their own kind.

If trophic nerve impulses are not interfered with, normal conditions may supervene when the irritation or inflammation subsides.

If involvement of the trophic nerve takes place so that efferent and afferent impulses are interfered with or inhibited, riotous development of the new progeny of cells will be invited. If the trophic nerve supplying the part is severed or permanently inhibited, ulceration will supervene.

The above theory places the etiology of cancer formation on a rational basis, and permits us to guard against its increase by prophylactic measures which readily suggest themselves.

Boston Medical and Surgical Journal

March 25

6 *Surgery of the Bile Passages with Special Reference to the End-Results. J. C. Munro, Boston.
7 *The Trend of the Clinician's Concept of Hysteria. T. A. Williams, Washington, D. C.
8 The Calcaneofibular Ligament and its Neighborhood, Based on Dissections. E. A. Tracy, Boston.
9 Pseudohermaphroditism. W. L. Harris, Providence, R. I.
10 Hand Sterilization (concluded). C. G. Cumston, Boston.

6. **Surgery of the Bile Passages.**—Munro discusses the end results in 198 out of 300 operations and arrives at the following conclusions:

1. An analysis of the cases demonstrates that jaundice is present in a majority of all, even the simple gall-bladder cases, at some time, and that in a large majority of common duct cases there is jaundice.
2. The pancreas is not infrequently pathologic, as determined by examination of the open abdomen.
3. Adhesions are present in a large majority of cases, and may be the direct cause of symptoms rendering all medical treatment more than futile.
4. Pulmonary complications must be reckoned with in prognosis, but they are less frequent than anticipated.
5. Cholecystostomy is normally a more suitable operation than cholecystectomy, unless the gall-bladder is definitely functionless.
6. Recurrence of symptoms may be due to adhesions or a contracted gall-bladder as well as to overlooked stones.
7. Toxemic cases are best treated medically until the acute state is passed.
8. Fatal capillary hemorrhage may be controlled to an extent not yet determined by the use of fresh animal serum.

7. **Hysteria.**—Williams considers that the disappearance of many of the supposed stigmata of hysteria is proof of their artificial nature. For ten years, neither Babinski nor Bernheim has seen a case of hysterical anesthesia except in patients whose sensibility has been previously medically examined. It is possible to create at will sensory stigmata contracture, motor palsy, etc., and doubtless in the past the stigmata were produced by unconscious suggestion. The hysterogenetic zones also can be determined and changed at the suggestion of the operator. Hysteria is called the great simulator, and hysterical patients are often believed to simulate deliberately and consciously, but the so-called hysterical simulation is only a variety of the perversity of imagination, termed mythomania, the main element of which is the love of playing a part and belief in that part; yet all hysteria must not be confounded with mythomania, or *vice versa*. These cases are allied psychologically to the self-accusers and self-mutilators. The fact that symptoms of hysteriform appearance may be engendered by emotional shock or moral commotion is not pathognomonic, for these causes may produce apoplexy in diabetics or subjects of Bright's disease, and tachycardia in Graves' disease or other cardiac susceptibility. Their rapid disappearance is not special, for tabetic gastric crises and hepatic or nephritic colics often stop abruptly. Variability is not a base for definite diagnosis, for syphilis, tuberculosis, gout, etc., are most variable. Neither is absence of organic change, for no such change is apparent in certain types of insanity and in psychasthenia. Suggestibility varies not only from individual to individual, but from time to time in the same individual, especially under fatigue, want of sleep, slight disorders of digestion, alimentary and chemical intoxications, those due to the slighter infections, and the climacteric. The subjective symptoms of the neurasthenic state may be acquired by suggestion, and many cases of so-called neurasthenia are purely imaginary. That the reflexes can not be influenced by suggestion is true, but few neurologists still believe them modifiable by hysteria. As to amnesia, which Janet lays stress on as distinguishing hysterical from psychasthenic crises, it must be remembered that conception comes before memory, and the nature of the perceptions forgotten must be taken into consideration. Incidentally, Sidis has shown that the alleged fallacious sense perceptions of hysterical patients do not depend on faulty observations, but are derived from a desire to conform to the supposed intention of the observer. All individuals convey thoughts, often quite unconsciously by gestures, facial expressions, tricks of speech, and tones of voice. These pass unnoticed by observers whose minds are taken up with what appeals to the constructive intelligence, but to those incapable of complicated mental synthesis, the intellectual elements appeal less than these minor sources of expression. Suggestibility depends on such a lack of synthetic and critical quality of mind, and the hysterical person, too indolent to make an effort at synthesis and too abulic to inhibit an impression once formed, perceiving the externals only of intercourse and feeling, rather than formulating, acts on the sense of knowledge thus engendered from data not even in the cognizance of others. The fixed ideas of hysterical individuals are often produced thus, and the same applies to amnesia. The patient easily persuades himself that he remembers only what he believes he is desired to remember.

New York Medical Journal

March 27

11 External Roentgen Treatment of Internal Structures (Eventration Treatment). C. Beck, New York.
12 Intracranial Causes and Operative Treatment of Trigeminal Neuralgia. J. B. Deaver, Philadelphia.
13 *Painful Heels. I. D. Steinhardt, New York.
14 Double Dilator for Use in Obstetrics and Gynecology. J. J. Rectenwald, Pittsburg.
15 The Medical Mind. R. L. Pittfield, Philadelphia.
16 Metabolism of Certain Skin Disorders (concluded). J. C. Johnston and H. J. Schwartz, New York.
17 *Eucalyptus in Leprosy. H. T. Hollmann, Kalaupapa, Molokai, H. T.
18 Symbiotic Action of the Epithelial Cells of the Skin on the Cells of the Epithelium of the Kidneys. B. R. LeRoy, Athens, O.

13. **Painful Heel.**—Steinhardt writes of a type of severe pain and tenderness in the heel which refuses to yield to ordinary treatment. An acute inflammation of the os calcis is a common cause, and there is frequently a history of gonorrhea, gouty rheumatism, or trauma. Steinhardt has seen over 30 cases in the past two years. He quotes the pathologic report on a gonorrheal case in which brittle exostosis was found, showing a granulation tissue. The process was an ossifying periostitis and gonococci were found. In other cases different cocci have been found. Complaint is first made of general pain in the toes and foot, which, after a time, becomes localized in the heel, with tenderness, especially near the tubercle of the os calcis. An *x*-ray picture will show spicules of bone protruding from the os calcis, with a surrounding periostitis. The condition is curable by proper treatment—removal of the offending exostosis with postoperative treatment of the underlying cause. The technic of the operative part of the treatment is as follows:

1. Apply Esmarch bandage.
2. Usual cleansing of entire foot for operative procedure.
3. Apply tincture of iodin to line of incision.
4. Make an incision about two or two and one-half inches long terminating at a point about one-half inch behind the tubercle of the os calcis. This incision should be right down to the bone and in the middle line.
5. Insert retractors and locate exostosis at bottom of wound.
6. Chisel away exostosis with a grooved chisel and scrape the bone with a sharp spoon until the surface is smooth and seems healthy.
7. Wash out with sterile normal salt solution.
8. Close wound without drainage, with interrupted catgut sutures.

The patient should rest in bed for about three days, and then, if everything is going smoothly, may be allowed to sit up. At the end of two weeks, the feet may be put to the ground, and after twenty-one days, the patient should be around as usual, continuing, if still necessary, the postoperative treatment.

17. **Leprosy.**—Hollmann, in a second publication, confirms in the main his former statements as to the marked ameliorations in the clinical manifestations of leprosy effected at the leper settlement, Molokai, by the use of eucalyptus in medicated baths and taken internally. Eucalyptus has been used at the leper settlement for two years, and Hollmann states that the following effects have been noted: The skin glands are stimulated and the skin becomes softer and more pliable; the leonine facies is less marked; there is marked improvement in leprous neuritic pains; itch is cured; excoriations,

ulcerations, erosions, and abrasions of the skin and mucous membranes are healed; swollen head fever has largely disappeared, and leprous fever is decidedly decreased. He modifies his previous statement that this treatment would overcome partially contracted fingers; it has not permanently done so. Stiffness is relieved only when treatment is continued regularly. He can not substantiate his previous assertion that this treatment will cause leprous tubercles to disappear. In the two years, 275 patients have taken the treatment, with the result that the death rate of the leper settlement has been less than 5 per cent., of which less than 2 per cent. was due to leprosy. Every one of the 275 patients who have been helped has had the disease from 5 to 20 years. It is believed that patients in the incipient stage of the disease might possibly be cured.

Lancet-Clinic, Cincinnati

March 27

19 Neuroses and Psychoses of Women. C. D. Palmer, Cincinnati.
20 *Systemic Effects of Chronic Infections of the Throat and Nose. F. G. Stubbs, Chicago.
21 Progressive Pernicious Anemia. J. A. Witherspoon, Nashville, Tenn.

20. Abstracted in THE JOURNAL, Nov. 21, 1908, p. 1806.

Medical Fortnightly, St. Louis

March 25

22 Self-Limited Diseases. J. R. Buchanan, Nevada, Mo.
23 Atonia Gastrica, its Significance and its Therapy. A. Rose, New York.
24 Then and Now. W. F. Waugh, Chicago.

Virginia Medical Semi-Monthly, Richmond

March 12

25 Treatment of Hip Disease. H. Gibney, New York.
26 Neurasthenia. J. N. Upshur, Richmond.
27 Pulmonary Tuberculosis, 2,133 Cases Treated in the Asheville Climate from 1897 to January, 1907. J. A. Burroughs, Asheville, N. C.
28 Hydrotherapy. J. C. Walton, Richmond, Va.
29 Treatment of Whooping Cough—With a Plea for a Better Experience with Antitoxin. S. Harnsberger, Catlett, Va.
30 Gall-Bladder Operations. E. M. Magruder, Charlottesville, Va.
31 Hemlock and Cancer. W. Waugh, Chicago.

March 26

32 Mechanism of the Secretion of the Pancreatic Juice and the Question of Hormones. T. Hough, Charlottesville, Va.
33 Interdependence of Physicians and Surgeons. J. A. Hodges, Richmond.
34 Operative Treatment of Hyperthyroidism. C. H. Mayo, Rochester, Minn.
35 Antitoxin or Serotherapy in Treatment of Whooping Cough, Measles and Scarlet Fever. S. Harnsberger, Catlett, Va.
36 Importance of Early Diagnosis of Tumors. J. S. Horsley, Richmond.
37 Surgery of the Bile Tract. J. E. Cannaday, Charleston, W. Va.
38 Cancer of the Liver. O. F. Blankenship, Richmond, Va.
39 Amputation of the Knee Joint Under Local Anesthesia. C. S. White, Washington, D. C.
40 Treatment of Epithelial Cancer. J. T. Clarke, Mount Solen, Va.

American Journal of Surgery, New York

March

41 *Intestinal Resection; Preliminary Report of a Simplified Method. H. Lilienthal, New York.
42 Sigmoiditis and Perisigmoiditis. J. P. Tuttle, New York.
43 *Sacral Suspension of the Uterus—A New Technic. J. Van D. Young, New York.
44 *Cancer of the Breast. W. Meyer, New York.
45 Surgery of Foreign Bodies, Especially Those Occurring in the Skeletal Tissues, Including Description of a Localizing Method. W. M. Brickner, New York.
46 *Operation of Direct Blood Transfusion—Description of a Simple Method. J. A. Hartwell, New York.
47 *Avoidance of Hemolysis in Transfusion. M. Rehling and R. Weil, New York.
48 *Uterine Fibrosis and its Surgical Treatment by a New Method of Vaginal Hysterectomy. S. W. Bandler, New York.
49 Dislocations of Cervical Vertebræ. J. P. Warbasse, Brooklyn.
50 A Plastic Mastoid Operation; New Operation for Acute Mastoiditis. F. T. Hopkins, New York.
51 *A Modified Operation for Inguinal Hernia. A. E. Sellenings, New York.
52 Surgery of the Pericardium and Heart. H. B. Delatour, Brooklyn.

41. **Intestinal Resection.**—Lilienthal has been so satisfied with the results of the treatment of the stump in appendicectomy by simple ligation and carbolic acid cauterization of the mucosa, that he has applied the same method to the stumps in intestinal resection of various forms. In this preliminary communication he reports briefly six cases. He gives the warning to tie the ligature tight enough to crush the mucosa and to sterilize the stump with pure carbolic acid not followed by alcohol.

43. **Suspension of the Uterus.**—Young describes a method of suspending the retroverted uterus by the uterosacral ligament, for which he claims the following advantages: The supporting of the uterus in its normal position from the bony structure above; the body and especially the fundus are freely movable for all the functions of the body. This procedure does not distort but reproduces the curve of Carus. There are no artificial bands through which intra-abdominal hernia may occur. In the event of pregnancy there is no possibility of dystocia. It relieves the patient anatomically and symptomatically.

44. **Cancer of the Breast.**—Meyer says that while we know that the disease may be cured if treated early and radically, we have also learned that we can guarantee such a fortunate issue in no single instance. Early operation depends on early diagnosis. He discusses the early diagnosis of cancer of the breast with reference to scirrhus, adenocarcinoma, diffuse interstitial fibroma, and suppurative mastitis. In adenocarcinoma there is no apparent effect on the nipple. It is hardly possible to confound scirrhus with diffuse interstitial fibroma, which belongs to the borderland cases but needs prompt radical operation. Chronic suppurative mastitis usually develops three or four years after nursing, is diffuse, and yields pus on aspiration. Simple incision usually effects a cure. Meyer next describes the change made by him in his original technic for the removal of the breast. He makes the axillary part of the skin incision pass about two fingers' breadths above the lower border of the pectoralis major. This permits of a more effective shifting of the lower flap at the completion of the operation, covering a greater part of the resulting defect. He forms one large upper and one large lower flap, circumcising the base of the breast without regard for the skin, the defect being later grafted. He believes this technic can not be improved on, unless the future should show it advisable to resect the clavicle, to follow up the entire chain of glands into the supraclavicular space, extirpating them with the surrounding fat in one mass. The removal of the supraclavicular glands in all cases is still a moot point, but a recent experience which Meyer describes inclines him toward it. He is pleased with the use of Bier's suction cup as an adjuvant in the after-treatment of operating fields that can not be cleared of disease, even macroscopically. He insists strongly on extirpation of any accessory mammary glands, and the entire breast with them, and refers to two experiences that illustrate and emphasize this point. He quotes statistics of 80 patients treated by means of this radical operation. Of 16 operated on from 10 to 12½ years ago, 3 (18.7 per cent.) are alive and well 11 and 12½ years after operation. Of 27 patients operated on from 5 to 10 years ago, 6 (22.2 per cent.) were alive and well in May, 1907. Of 43 patients operated on between September, 1894, and April, 1902, 17 (39.5 per cent.) remain free from recurrence from 3 to 12½ years, and 13 (30 per cent.) from 5 to 12½ years. Of 20 patients operated on from 3 to 5 years ago, 10 or (50 per cent.) were alive and well 20 months ago. Of 63 cases operated on more than 3 years prior to May, 1907, 28 (44.4 per cent.) lived from 3 to 12½ years after operation. Of Meyer's 80 patients 40, or 50 per cent., died within 3 years, 24 of these within 1½ years. No selection was made, and he has never refused the operation. With regard to borderland tumors, he is convinced that the only safe plan is to operate on every patient over 25 or 30 years of age, and not to wait for unmistakable signs of malignancy. End-results can only be improved by early radical operation based on early diagnosis; by educating the public to understand that the most painlessly developing tumor is the most dangerous one; by operating on circumscribed apparently benign tumors, which may develop malignancy; and by finding the cause of carcinoma.

46. Abstracted in THE JOURNAL, Jan. 30, 1909, p. 411.

47. **Avoidance of Hemolysis in Transfusion.**—Rehling and Weil describe experimental investigations which lead them to conclude that test tube reactions, in spite of the differences in conditions, appear to afford a reliable criterion of the re-

sults of the intended transfusion. This fact has been verified experimentally on dogs, and once on a human patient. It seems advisable, therefore, that every transfusion should be preceded by such tests.

48. **Uterine Fibrosis.**—Bandler describes this condition and says that the remedy which absolutely prevents the various combinations of symptoms is vaginal hysterectomy without removal of the ovaries. In this way unbearable hemorrhage is prevented; and the regular or irregular recurrence of the condition known as constitutional dysmenorrhea is at an end. He describes with numerous illustrations a method of simple vaginal hysterectomy which he has practiced in 110 cases without a fatality. The operation when done in a leisurely manner rarely takes more than 40 minutes, and the patient suffers scarcely any postoperative annoyance.

51. **Inguinal Hernia.**—Sellenings describes, with illustrations, a simplified operative technic, for which he claims the following advantages: (1) Rapidity of performance; (2) diminished period of narcosis; (3) no dissection of sac, and tissue bruising therefore eliminated; (4) preservation of nerve distribution; (5) absence of the sometimes troublesome venous hemorrhage; (6) no manipulation of the cord, its vessels or the testicle.

Annals of Surgery, Philadelphia

March

53 *Intra-Abdominal Administration of Oxygen. W. S. Bainbridge, New York.
54 *Plastic Surgery of Blood Vessels and Direct Transfusion of Blood. I. Levin, New York.
55 *Nerve Involvement in the Ischemic Paralysis and Contracture of Volkmann. J. J. Thomas, Boston.
56 *Operating on the Cranial Vault. H. C. Masland, Philadelphia.
57 Surgical Treatment of Internal Hydrocephalus. R. S. Fowler, Brooklyn.
58 Operations Involving Free Opening of the Thorax. A. E. Rockey, Portland, Ore.
59 Value of the Leucocyte and Differential Counts in Appendicitis. G. N. Pease, New York.
60 Typhoid With Multiple Perforations, Repeated Operations Followed by Ultimate Recovery. A. J. Roberts, Bridgeport, Conn.
61 Angiorrhaphy. F. B. Lund, Boston, Mass.
62 Perforating Wound of the Knee Joint. G. Torrance, Birmingham, Ala.
63 Apparatus for the Introduction of Salines into the Rectum. G. J. Saxon, Philadelphia.
64 *The Sitting Posture; Its Postoperative and Other Uses. W. D. Gatch, Baltimore.
65 *Method of Splinting Skin Grafts. J. S. Davis, Baltimore.

53. **Intra-Abdominal Administration of Oxygen.**—Bainbridge after referring to a previous communication in the *New York State Journal of Medicine*, June, 1908, reports the results of continued tests of the utility of intra-abdominal administration of oxygen wherever indicated. It is now administered for the following purposes:

1. To lessen shock, hemorrhage, nausea, and vomiting.
2. To overcome negative intra-abdominal pressure after removal of large tumors.
3. To prevent the formation of adhesions.
4. For its effect on tuberculous peritonitis of certain types.
5. For its effect on pus-producing organisms and their toxins.

He details the method of administration and reports a supplementary series of cases illustrating its application. Bainbridge cautions as to the necessity of watching for failing strength after all the gas is absorbed and the administration has ceased. He gives the following tentative conclusions: 1. From Cases I to XVI, reported in his former paper and from Cases XVII to XXX, detailed here, it may be safely said that oxygen, intra-abdominally administered, has a distinct field of usefulness in lessening shock, hemorrhage, nausea and vomiting; in overcoming negative intra-abdominal pressure after removal of large tumors; in preventing the formation of adhesions, or, when broken up, lessening the liability of their return; and in influencing favorably certain types of tuberculous peritonitis. From Cases I to II (his own), and Cases III (Dr. Greene's), in which the gas was introduced into the peritoneal cavity in septic peritonitis, sufficient beneficial effect was noted to warrant the hope that further clinical experience may establish the efficacy of the gas as an adjuvant in the treatment of this condition.

54. Abstracted in THE JOURNAL, Jan. 30, 1909, p. 412.

55. **Ischemic Paralysis.**—Thomas, finding this condition apparently frequent, is surprised at the paucity of reported cases. He does not think that tight bandaging or neglect is the only cause. He reports four cases which he has seen and reviews in tabular form the 107 cases which he finds reported in the literature. The study of the cases of ischemic paralysis and contracture reported in the literature shows very clearly that this condition varies greatly in severity in different instances, and that in many of the cases we are dealing with complications of the primary trouble from secondary involvement of some of the nerve trunks of the arm, which produce disturbances that can not be relieved by the treatment of the contractures only. The individual patient must be carefully examined, therefore, with the question of nerve involvement in mind, and this condition should be considered in determining the treatment. He discusses the pathology and treatment.

56. Abstracted in THE JOURNAL, Jan. 23, 1909, page 321.

64. **The Sitting Posture After Operation.**—Gatch describes a bed in use in Johns Hopkins Hospital which can be made by any carpenter at small expense. The advantages of the bed are that it is simple, that it permits the patient to lie flat or to sit at any angle of elevation desired; that it holds a patient in the sitting posture all the time and without any effort on his part; that it permits of continuous irrigation of the bladder, rectum, or adjacent parts without wetting the bed or the patient; and finally, that it readily adapts itself to the comfort of a large class of patients who need to sit up more or less of the time. The therapeutic uses of the sitting posture are: (a) Operative (1) to drain the peritoneal cavity; (2) to lessen the danger of lung complications; (3) to permit continuous irrigations; (4) to promote comfort and general well being. (b) Non-operative, in numerous cases of pulmonary and cardiac disease, incontinence of urine or feces, paralysis, etc.

65. **Skin Grafts.**—Davis uses a coarse meshed net, such as is used for curtains, for keeping skingrafts in position. The stiffening is washed out and the net is soaked in gutta percha 30 parts, chloroform 150 parts. It is sterilized by keeping in 1 to 1,000 solution of bichlorid of mercury. Of course no hot material must come in contact with it at any time. After placing the skingrafts, a piece of this web rather larger than the grafted area is pressed snugly down on it. Its advantages are that it splints the grafts without too much pressure, and is easy to apply and secure in place. It does not adhere to the grafts or to granulations. It allows the free escape of any secretions which may form, and thus prevents maceration. Any sort of dressing may be placed over it. The progress of the healing may be observed at any time without danger of displacing the grafts.

American Journal of Physiology, Boston

March

66 *The Action of the Alkaloids of the Papaveraceæ on the Isolated Frog's Heart. W. Hale, Ann Arbor, Mich.
67 Action of the Alkaloids of the Papaveraceæ on the Motor Nerve Endings. W. Hale, Ann Arbor, Mich.
68 *Metabolism in Man With Greatly Diminished Lung Area. T. M. Carpenter and F. G. Benedict, Boston, Mass.
69 *Comparative Study of the Digestibility of Different Proteins in Pepsin-Acid Solutions. W. N. Berg, New York.
70 Chemical Studies on the Effects of Centrifugal Force on the Eggs of the Sea Urchin *(Arbacia Punctulata)*. J. F. McClendon, Woods Hole, Mass.

66. **Action of Alkaloids of the Papaveraceæ.**—The general result of Hale's work is that these alkaloids stimulate the heart in weak solutions and depress it in strong ones. In the case of cryptopin and sanguinarin there is no increase in the efficiency of the heart, although the rate is augmented by small amounts of these drugs. Thebain does not seem to be stimulant in any dilution. Heroin is more deleterious to the frog's heart than is codein or morphin. All the members of the series act as depressants of the motor nerve endings and it is shown that morphin and codein are clearly less toxic to the motor nerve endings than heroin, and that the latter in turn is less toxic than a number of the other members of the series studied.

68. **Metabolism in Man.**—Carpenter and Benedict experimented on a man whose respiratory area had been reduced

one-half by the total obliteration of one lung. Their conclusion from their work is that the reduction of the area for oxygen absorption and carbonic acid elimination in the lungs by about one-half has not materially altered the total metabolism.

69. **Comparative Study of Digestibility.**—Berg sums up the results of his experiments as follows:

1. Measured under uniform, or nearly uniform, digestive conditions, different proteins digest with unequal speed. The eleven proteins used in these digestion experiments divide themselves, with regard to their digestibility, into two groups, the first group consisting of 6 simple proteins, which were rapidly digested in pepsin acid solutions containing 10 mgm. of pepsin in 100 c.c. of solution; the second group consisting of 5 conjugate proteins, which were slowly digested in acid solutions containing from 50 to 500 mgm. of pepsin in 100 c.c. of solution. The order of digestibility, beginning with the protein which was most rapidly digested, is as follows: Edestin, myosin, alkali albuminate, acid albuminate, fibrin, coagulated egg albumin, ossein, nucleoprotein, tendo-collagen, elastin, tendo-mucoid.

2. The relative digestibility of an untried protein may be predicted only with uncertainty. That its digestive behavior will be similar to that of some other protein of similar chemical or physical constitution can not be assumed with safety. The question must be decided experimentally.

3. The relative digestive efficiency of the acid solutions used in these experiments was fairly uniform. For the first group of proteins the average order, beginning with the solution in which digestion was most rapid, is the following: Hydrochloric, nitric, oxalic, phosphoric, sulphuric, tartaric, lactic, citric, acetic, boric. For the second group of proteins (ossein excepted) the average order is the following: Hydrochloric, nitric, oxalic, sulphuric, phosphoric, tartaric, citric, lactic, acetic, boric.

4. In general, the greater the concentration of hydrogen ions in the digestive solutions used, other conditions being equal, the more rapid the digestion. While there was no exact proportionality, there was a general parallelism.

Journal of the Medical Society of New Jersey, Orange

March

71 *Development of the Navy Medical Corps to Meet the Modern Requirements of Specialization in Medical Practice. P. M. Rixey, U. S. Navy.
72 Salpingitis. J. W. Martindale, Camden.
73 Diagnosis and Treatment of Sarcomata. J. Tomlinson, Bridgeton.
74 Can the Nation be Perpetuated? Necessity for a National Bureau or Department of Health. D. Benjamin, Camden.
75 The Medical Profession and the Societies. D. E. English, Millburn.
76 What is Medicine? An Abstraction. G. K. Dickinson, Jersey City.

71. **The Navy Medical Corps.**—Rixey says that the medical corps of the Navy should be the equal of any organized body of medical military men in the world. The naval service, by virtue of its world-wide intercourse, is essentially aristocratic, requiring the instinct, discernment and conduct of a gentleman in its officers. The medical officer being on a plane of equality with the others, personal qualifications must enter into the determination of general suitability. The wide range in the character of the *clientèle* and responsibilities calls for professional ability and ready adaptability. The charge of financial interest demands strict integrity and capacity for handling an intricate and complex organization. The service presents fine opportunities for original work and initiative. Rixey discuses the place of tropical diseases in naval medical experience, the difference between naval surgery and military surgery, naval hygiene, the naval medical school, and the conditions of life and practice on a battleship. He urges that the service to-day affords as much in the way of pay, opportunities for the future, and satisfactory professional work for young men as any other public service.

Military Surgeon, Richmond, Va.

March

77 The Fleet Surgeon. His Position, Duties, Responsibilities and Training in Relation to the Fleet and its Sanitary Necessities. A Study in Organization. H. G. Beyer, U. S. Navy.
78 The Disposal of All Liquid Refuse of the Otis Excavators and of the Sanitary Carts, in a Maneuver Camp, by Evaporation on Heated Rocks. H. I. Raymond, U. S. Army.
79 Hypodermic Anesthesia (historical). W. T. Thackeray, Chicago.
80 The Mexican Wheeled Stretcher for the Transport of Wounded on the Battlefield. A. Ross, Mexican Army.
81 Militia Service Schools, With Particular Reference to the Medical Department. G. M. Muren, U. S. Army.

Illinois Medical Journal, Springfield

March

82 *Phagocytic Immunity and the Therapeutic Injection of Dead Bacteria in Endocarditis. Preliminary Report. E. C. Rosenow, Chicago.
83 *Hyperchlorhydria and its Treatment, Based on Animal Experiments. M. M. Portis, Chicago.
84 Throat Diseases in Children. H. G. Langworthy, Dubuque, Ia.
85 Differential Diagnosis Between Bronchopneumonia and Cerebrospinal Meningitis and Gastroenteritis in Their Early Stages. T. W. Gillespie, Peoria.
86 When Should an Operation be Performed for Strabismus (Squint or Cross-Eyes) in Children and in Adults? A. L. Derdiger, Chicago.
87 *Eye Defects in Backward Children. M. Frank, Chicago.
88 *Postoperative Nasal Hemorrhage. E. Pynchon, Chicago.
89 *New Method for Packing the Nostril. W. E. Casselberry, Chicago.
90 Report of the International Congress on Tuberculosis. A. E Smith, Freeport.
91 Influenza and its Complications. J. W. Dunn, Cairo.

82. **Phagocytic Immunity.**—Rosenow refers, in a preliminary report, to investigations undertaken to answer the following questions: How do the micro-organisms in endocarditis of this mild type protect themselves in the blood and endocardium, and ultimately cause death, when they seem to be without virulence, while those in pneumonia with their high grade of virulence are usually destroyed and recovery is the rule? The object of this study was primarily to explain, if possible, the mechanism involved in these and other allied questions and to determine the effect of the therapeutic injection of dead bacteria in endocarditis. A full report of the experiments will appear later. His conclusions are as follows:

1. The blood culture in endocarditis is the best means of making an early diagnosis. It should always be made for the identification and study of the infecting organism, as well as for prognostic reasons. Barring accidents, the greater the virulence the more grave the prognosis.

2. The therapeutic injection of dead bacteria in endocarditis has very little influence on the disease until late in its course, when there is a temporary improvement following the injections.

3. A very close relation exists between the biologic character of these organisms and their ability to produce endocarditis in the class of cases observed.

4. The organisms isolated, while of practically no virulence to animals and susceptible to phagocytosis on cultivation, appear to immunize themselves against the antibodies produced by the host, and thus to overcome the resistance of the latter.

83. Abstracted in THE JOURNAL, June 13, 1908, p. 2016.

87. **Eye Defects in Backward Children.**—Frank's experience leads him to conclude that:

1. Refractive errors are unusually frequent among backward children.

2. The correction of these defects by the fitting of proper glasses is followed by remarkable improvement of the mental power and allows the apparently backward child to keep up with its mates.

3. It would be decidedly good policy to have the eyes of all children with real or apparent mental deficiency thoroughly examined as a matter of routine.

88. This article is also published in the *Lancet Clinic*, March, 6, 1909, *Chicago Medical Recorder*, March, and the *Journal of Ophthalmology and Oto-Laryngology*, March.

89. **Packing the Nostril.**—Casselberry, while recognizing the superior efficacy of the posterior plug over an anterior pack in postoperative nasal hemorrhage, takes note of the painfulness and even dangers attendant on it and its removal. He has devised a tampon composed of a rubber finger cot, or preferably of what might be called a club finger cot, which, after insertion into the nostril, is filled by means of a tubular packer with a strip of sterile gauze, 1¼ inches wide and a yard or more in length. He describes the apparatus and the method of its use.

Albany Medical Annals

March

92 The Crime, the Criminal, and the Police. C. G. Cumston, Boston.
93 Successful Demonstration of the Problem of Obtaining Sterile Cow's Milk. J. T. Howell, Newburgh, N. Y.
94 Ether Gas Anesthesia. C. R. Marsh, Oneonta, N. Y.

Kentucky Medical Journal, Bowling Green

March

95 Medical Defense. E. W. Hines, Bowling Green.
96 Idem. J. J. Moren, Louisville.
97 *Introduction of Tubes, Bougies and Metal Instruments into the Lower Bowel, with Radiographic Illustrations. G. S. Hanes, Louisville.
98 Apparatus and Technic Used in Making Radiographs. E. T. Bruce, Louisville.
99 Placenta Prævia, With Report of Two Cases of Placenta Prævia Centralis. E. Speidel, Louisville.
100 The Public Health. U. L. Taylor, Columbia.
101 Nasal Sinuses. S. J. Smock, Springfield.
102 Triumphs in Medicine. E. Morris, Sulphur.
103 Scarlet Fever. W. Blair, Glen's Fork.
104 Nitrous-Oxid Anesthesia—Report of Cases. J. W. Helm, Louisville.
105 Some Differences Between the American and English Physician. G. B. Wagner, Newport.

106 Uremia. D. O. Hancock, Henderson.
107 Stricture of the Esophagus. C. G. Lucas, Louisville.
108 Goiter. P. F. Eve, Nashville.
109 Etiology, Symptoms and Diagnosis of Acute Mastoiditis. W. G. White, Louisville.
110 Mastoiditis—Its Non-Operative and Prophylactic Treatment. G. A. Robertson, Louisville.
111 Operative Treatment of Acute Mastoiditis. I. A. Lederman, Louisville.

97. **Introduction of Rectal Tubes.**—Hanes gives the result of his observations on the behavior of rectal tubes and bougies when introduced into the lower bowel, in the hope of throwing light on the question of the passage of tubes high up into the bowel. His conclusions are as follows:

1. Soft rubber tubes and bougies rarely, if ever, enter the descending colon, unless they are carried well into the sigmoid through a sigmoidoscope.
2. Tubes of medium flexibility can be introduced further into the bowel than those that are very soft or rigid.
3. Long soft rubber tubes when forced into the bowel coil on themselves, press on the gut wall and stimulate peristalsis and straining, all of which serves to prevent the successful administration of enemata.
4. Enemata should be given with the hips elevated, and the water or solution allowed to pass in very slowly, and through a tube introduced into the bowel not more than three or four inches.
5. I have carefully measured the capacity of the rectum and found it to be much less than ordinarily supposed. The rectum in a boy thirteen years of age had a capacity of eight ounces. The rectum in a man five feet ten and a half inches in height had a capacity of only fourteen ounces.
6. I feel confident that, when as much as one quart of water is injected into the rectum, a portion of it passes to the upper limits of the sigmoid and doubtless into the descending colon.
7. There is scarcely any doubt that the liquid passes along the entire large gut into the cecum when large enemas are administered.
8. There is no reason why water can not be forced to the cecum. If the sphincter muscles remain contracted it can take no other course. Everyone knows how patients complain when solutions are rapidly thrown into the bowel, and, if a little time is given, how quickly the desire to evacuate the bowels is relieved. The interpretation is that the rapid distention causes the desire to evacuate, and as the water passes up into the gut the pressure is relieved.
9. The entire large gut, including sigmoid and rectum, is much shorter *in situ* than we have previously been led to believe.
10. My experience in the use of bismuth subnitrate does not correspond, by any means, with recent reports of others who have used it. At three or four different times from a half to one pound was injected without untoward results. Others have reported symptoms of poisoning when only two or three drams were injected.
11. My observations lead me to believe that there is no such motion in the rectum as reversed peristalsis.

Journal of Ophthalmology and Oto-Laryngology, Chicago

March

112 Symblepharon and False Pterygium From Fireworks Burn: Successful Operation. C. W. Hawley and J. F. Campbell, Chicago.
113 Foreign Body in the Orbit of Long Standing. Report of a Case. J. V. Clothier, Philadelphia.
114 Demonstration of Foreign Body in the Esophagus Removed by Esophagoscopy. H. Stolte, Milwaukee.
115 *Postoperative Nasal Hemorrhage. E. Pynchon, Chicago.

115. See reference No. 88.

Wisconsin Medical Journal, Milwaukee

February

116 *Mobilization of the Duodenum for the Removal of Stones From the Common Duct. R. Elmergreen, Milwaukee.
117 Anatomy, Pathology and Operative Technic in Gall Bladder Surgery. H. A. Sifton and C. A. Evans, Milwaukee.
118 *Administration of Oxygen for Postanesthetic Nausea and Vomiting. R. P. Peairs, Milwaukee.

116. **Mobilization of the Duodenum.**—Elmergreen summarizes his article as follows:

1. The removal of a stone from the retroduodenal or transduodenal portions of the common duct, under unfavorable circumstances, remains a difficult and hazardous feat in surgery.
2. The mobilization of the duodenum to gain access to the common duct is a recognized procedure of incomparable value.
3. Thorough digital exploration of the deep biliary passages and good drainage are the secrets of success in common duct surgery.
4. The day of irremediable obstruction of the common duct has passed.

118. Abstracted in THE JOURNAL, Aug. 8, 1908, p. 524.

American Journal of Urology, New York

March

119 *Problems Relating to Prostatectomy. L. R. Bangs, New York.
120 Hematuria and its Treatment. J. W. Koehn, Chicago.
121 Serodiagnosis of Syphilis (concluded). G. A. DeS. Saxe, New York.
122 Neisser-Bacterin (Gonococcus Vaccine) in Gonorrheal Arthritis. W. J. Robinson, New York.
123 Removal of Large Renal Calculus: Recovery. H. B. Angus.

119. Abstracted in Society Proceedings in THE JOURNAL, Feb. 20, 1909, p. 657, and published in *The New York State Journal of Medicine*, March, 1909.

Journal of the New Mexico Medical Society, Albuquerque

March

124 Diet and Rest in Pulmonary Tuberculosis. S. G. Sewell, Albuquerque, N. M.
125 Postoperative Treatment of Abdominal Section. J. Vance, El Paso, Tex.
126 *Sequelæ of Appendiceal and Puerperal Infections, With Notes on Appendicitis in Children. W. H. Burr, Gallup, N. M.
127 The Eosinophile and Opsonic Index. S. D. Swope, Deming, N. M.

126. **Appendicular and Puerperal Infection.**—Burr says that many puzzling cases occur in which patients develop sequelæ that, in the absence of careful postmortem and microscopic examination, can not be explained as belonging to the ordinary classical sequelæ of fatal appendicitis. He has no doubt that if every fatal case of appendicitis treated with or without operation were carefully examined by scalpel and microscope, it would be found that, even in patients operated on who succumbed, the operation contributed little or nothing to the fatality, which was the result of an infection already beyond surgical aid. The lesson to be learned is that there is no such thing as benign appendicitis.

Northwest Medicine, Seattle, Wash

March

128 Diffuse Septic Peritonitis. E. B. McDaniel, Baker City, Ore.
129 Injuries to the Eye and Adnexa (concluded). H. V. Würdemann, Seattle, Wash.
130 Gallstone Disease Complicated With Necrotic Pancreatitis. L. R. Markley, Bellingham, Wash.
131 *Relative Value of a Medical and Surgical Diagnosis of Obscure Intra-Abdominal Disease. R. C. Coffey, Portland, Ore.

131. **Diagnosis of Obscure Intra-abdominal Diseases.**—Coffey discusses the relation of the family physician, in dealing with obscure cases, to the specialist—internist, surgeon or other. He sums up the relative merits of the general practitioner, the internist, the surgeon and the laboratory man as follows: The general practitioner, whose time is taken up with the multitude of his duties, is not prepared to ferret out the intricate problems of the obscure abdominal cases. The internist is not always safe, for the reason that he takes great pride in his logic, based on too little experience from actual demonstration. The surgeon is apt to be rash, because of the ease and safety of an exploratory operation. The laboratory man is not safe when left alone, because of the many features of the disease which have weight, but which have not been shown in the laboratory. The key to the whole situation is a thoroughly reliable scientific laboratory, which is supported by the internist, the surgeon, the family physician, and the neurologist, and which should be independent of all. Coffey's conclusions as to obscure abdominal conditions are as follows:

1. A persistent and obscure chronic abdominal condition, which does not yield to treatment in a reasonable length of time, is out of the province of the average general practitioner or family physician and should be referred to a specialist.
2. The specialist will be either an internist, a surgeon, or a neurologist.
3. If the patient is below the usual cancer age (say 38) and presents no evidence of obstruction of any kind, it is safe to refer the case to the internist, who should call the surgeon if he fails to give relief or finds a surgical condition.
4. If the patient is in the cancer age (from 38 upward) and is gradually losing weight or presents symptoms of obstruction of any kind, the case should be referred to a surgeon, who should call an internist in consultation in case of doubt.
5. If the patient presents other nervous features aside from the abdominal trouble, the neurologist should be called.

Journal of the Michigan State Medical Society, Detroit

March

132 *Diagnosis and Treatment of Pleurisy With Effusion. F. Smithies, Ann Arbor.
133 The Layman Occupancy of Large Patches in the Field of Medical Practice. L. Connor, Detroit.
134 *Nerve Involvement in Fractures of the Extremities. C. S. Oakman, Detroit.
135 Diagnosis and Indications for Treatment of Cholecystitis. R. Holmes, Chicago.
136 Tertian Malaria Acquired in Michigan. W. M. Donald, Detroit.

132. **Pleurisy with Effusion.**—Smithies reviews this subject exhaustively, using for the purpose the case records of Professor Dock's service at the University Hospital, Ann Arbor. He discusses the laboratory findings and the phenomena on inspection, and insists on the importance of careful observations of external evidences of the movements of the diaphragm. The examination of 16 patients, while too small a

series to warrant absolute statements, suggests that the paravertebral triangle of dulness furnishes an important confirmatory sign in the diagnosis of pleural exudate. It is likely to be of special value when patients are too weak to submit to prolonged percussion of the back. Smithies lays considerable stress on the diagnostic importance of egophony. When one once gets the "aural picture" of what is really meant by egophony—the peculiar phonographic or telephonic, rather than bleating, quality of the spoken words—its presence, with other physical phenomena, warrants exploratory puncture. Smithies' cases have not shown that the variety of exudate—serous or purulent—markedly alters the degree of voice transmission. In the main, they bear out Baccelli's dictum, that the whispered voice is better transmitted through serous than through purulent exudates.

134. Abstracted in THE JOURNAL, Aug. 29, 1909, p. 785.

Laryngoscope, St. Louis, Mo.

March

137 Investigation on the Anatomic Structure and Relationships of the Labyrinth in the Reptile, the Bird, and the Mammal. A. A. Gray, Glasgow, Scotland.
138 Various Affections of the Voice and Their Local Causation. W. A. Wells, Washington, D. C.
139 Double Chronic Purulent Otitis Media With Extradural and Intradural Abscess, Recovery With Good Hearing. G. A. Leland, Boston.
140 Eruptive Conditions of the Nose and Throat From the Point of View of the Laryngologist. F. Cohn, New York.
141 Eruptive Manifestations in the Nose and Throat of Children, From a Pediatric Standpoint. L. Fischer, New York.
142 Rhinoscleroma. E. L. Kenyon, Chicago.
143 Atrophic Rhinitis. S. H. Large, Cleveland, O.
144 Suppurative Middle Ear Disease With Involvement of the Labyrinth Limited to the Right Cochlear Portion and to the Left Vestibular Portion. G. W. Boot, Evanston, Ill.
145 Removal of Laryngeal Tumors by Direct Laryngoscopy. R. H. Johnston, Baltimore.
146 A Modified Tonsil Snare. J. R. Noyes, Brockton, Mass.

Texas State Journal of Medicine, Fort Worth

March

147 *Pathology of Old Age: Can it be Delayed? J. D. Covert, Fort Worth.
148 The Duties of the County Health Officer. J. M. Andrews, Wharton.
149 Starvation Treatment of Malignant Disease. E. H. Cary, Dallas.
150 Case of Congenital Dislocation of the Hip. O. L. Norsworthy, Houston.
151 Fibrosarcoma of the Brain. J. W. Rawls, Thornton.
152 *Treponema Pallidum*. M. A. Wood, Galveston.
153 Psychoneuroses. H. Taylor, Marshall.
154 Economic Problems in the Maldevelopment of the Upper Air Tract. H. B. Decherd, Dallas.
155 The Surgical Conscience. C. M. Rosser, Dallas.

147. **Old Age.**—Covert says that old age may be said to be the result of two great causes: First, the potential or inherited vitality of the tissues of the body: Persons coming from long-lived families, or other things being equal, have more inherited vitality than those coming from short-lived families. Their tissues are capable of standing the wear and tear of existence, are capable of assimilation and performing normal metabolism over a greater period of time. Thus a good constitution is of the greatest importance, if one is to live to an old age. Second, arteriosclerosis: i. e., all the degenerative changes in the arteries, other than those immediately due to syphilis. Man's heredity we can hope at present to modify only through popular education. Covert discusses arteriosclerosis and its causation, and holds that we must recognize an arteriosclerosis of senile origin, due to exhaustion of inherent potential vitality of the tissues. The first effect of this senile degeneration is to produce insufficiency of elimination. Proper attention to hygiene, diet and exercise and appropriate medication will correct the functional derangement, or rather assist in elimination, so that toxins will not be retained and thus the progress of the condition will be delayed. We are familiar with the arteriosclerosis of nephritis. Usually, the terminal stages of this condition are directly the result of it. It only emphasizes the importance of proper elimination through the kidneys at any stage of the disease, and especially so in its incipiency, as it is then that we shall be able to influence the condition favorably. By a thorough appreciation of all the causative factors of arteriosclerosis and the early recognition of their action in any case it is possible to delay its onset and the accompanying senile state.

Atlanta Journal-Record of Medicine

February

156 Some Cases of Blood in the Urine. A. L. Fowler, Atlanta.
157 Acute Traumatic Tetanus Treated by Magnesium Sulphate. A. P. Heineck, Chicago.
158 "Tricks in All Trades but Ourn." A. G. Hobbs, Atlanta.
159 Two Recent Cases of Gastroenterostomy. E. G. Jones, Atlanta.
160 Esthetic Alimentation. G. M. Niles, Atlanta.

Bulletin Johns Hopkins Hospital, Baltimore

March

161 *Multiple Hereditary Telangiectases Causing Hemorrhage (Hereditary Hemorrhagic Telangiectasia). F. M. Hanes, Baltimore.
162 *Place of Protozoology in the Medical School Curriculum. O. T. Schultz, Cleveland, O.
163 General Infection With *Bacillus Mucosus Capsulatus* Followed by an Areolar Abscess of the Liver and General Peritonitis. Autopsy. J. H. Hewitt.
164 Influence of Sewers and General Sanitation on the Prevalence of Tuberculosis. G. M. Kober, Washington, D. C.
165 *E. L. Trudeau, M.D.
166 Tuberculosis—A Plan of Study. W. L. Moss, Baltimore.

161. **Hereditary Hemorrhagic Telangiectasia.**—Hanes describes eight typical instances of a remarkable affection occurring in two unrelated families, reviews briefly all previously reported cases, and presents a general clinical picture. He defines it as "an hereditary affection manifesting itself in localized dilatation of capillaries and venules forming distinct groups, or telangiectases, which occur especially on the skin of the face, nasal and buccal mucous membranes, and give rise to profuse hemorrhage either spontaneously or as the result of trauma." Three factors seem of etiologic import, namely, heredity, repeated traumatisms and the abuse of alcohol. The red spots are true vascular formations and not blood extravasations. They blanch on pressure and regain their color on removal. Hemorrhage, profuse and productive of anemia, is the one constant symptom and the source of all other symptoms. In most cases it is an epistaxis. Multiple telangiectases constitute the sole characteristic sign of the affection. A split pea represents approximately their maximum development. They are true developmental faults, beginning in childhood, being increasingly annoying in adolescence, and a menace to health in later life. There is no reasonable diagnostic difficulty. Destruction of the telangiectases by chromic acid fused on a probe is the treatment. The action of the acid can be checked by an alkali. The condition constitutes a definite malady, and as such deserves a name of its own. Hanes therefore suggests hereditary hemorrhagic telangiectasia.

162. **Protozoology in the Medical Curriculum.**—Schultz says that a review of general protozoan biology is of value to the student, not only because of the mental training that it may give, but also because many of the facts brought out by a study of the protozoa are applicable to other subjects with which the student must become familiar. Cellular pathology in so far as it is really cellular pathology and not tissue or organ pathology, is at a standstill and can advance little further by the methods at present in use by pathologic investigators. He discusses the training of the powers of observation, the pathogenic action of the protozoa, and outlines the course of protozoan biology in use at the Western Reserve Medical College.

165. **Edward L. Trudeau, M.D.**—This is a description of a volume of reprints presented by his pupils to Dr. Edward L. Trudeau on his sixtieth birthday.

Journal of Advanced Therapeutics, Rahway, N. J.

February

167 Electricity in Diseases of the Female Pelvic Organs. H. F. Pitcher, Haverhill, Mass.
168 Possibilities of Radiant Light (continued). T. D. Crothers, Hartford, Conn.
169 Cataphoric Operations as Modified by the Topographic Situation of Particular Neoplasms, With Detailed Report of Cases (continued). G. B. Massey, Philadelphia.

Chicago Medical Recorder

March

170 *Vaginal Hysterectomy for Carcinoma of the Cervix. H. T. Byford, Chicago.
171 *Postoperative Nasal Hemorrhage. E. Pynchon, Chicago.
172 *Psychotherapy From the Psychologist's Point of View. J. R. Angell, Chicago.
173 *Serodiagnosis of Syphilis and its Clinical Value. W. J. Butler, Chicago.

174 Some Fallacies in the Care and Treatment of Children. H. W. Cheney, Chicago.
175 Hydrotherapy in General Practice. W. L. Secor, La Grange, Ill.
176 *Sterilization of Criminals and Other Defectives by Vasectomy. W. T. Belfield, Chicago.

170. Abstracted in Society Proceedings in THE JOURNAL, Jan. 16, 1909, p. 243, and published in the *Southern Medical Journal*, March, 1909.

171. Published in the *Illinois Medical Journal*, March, 1909, the *Lancet-Clinic*, March 6, 1909, and the *Journal of Ophthalmology and Oto-Laryngology*, March, 1909.

172. Abstracted in THE JOURNAL, March 13, 1909, p. 916.

173. Published in the *New York Medical Journal*, Jan. 30, 1909, and abstracted in THE JOURNAL, Feb. 13, 1909, p. 588.

176. **Sterilization of Criminals.**—Belfield urges the impotence of legislation restricting marriage, and says that the only effective measures will be, not such as appeal to the minds, but those that take effect on the bodies. Criminals and defectives must be prevented from procreation. Belfield discusses the methods suggested for that purpose, viz., isolation by colonization, and operative sterilization. The colonization idea is mainly endorsed by those who see the necessity for some measures, yet hesitate at castration. This measure, though often discussed, Belfield thinks will probably never secure legal sanction, because it destroys the subject's sexual capacity. Vasectomy, on the other hand, sterilizes without the slightest impairment of sexual power or pleasure. It merely closes the minute canals through which the spermatozoa must pass from the testes to the organs which secrete the bulk of the seminal fluid and deposit it in the genital canal of the female. The absence of spermatozoa from this fluid does not impair the mechanism of erection and ejaculation. This is abundantly proved by the robust sexual health of thousands of men who have been unwittingly sterilized through bilateral epididymitis, and who never suspect that their procreative functions are not perfectly normal until their marriages prove barren; they are potent, but not fertile. That vasectomy itself is equally harmless to sexuality is shown by the experience of those on whom it has been performed. Among these, within Belfield's personal knowledge, are married men who chose this means, rather than criminal abortion, to prevent the transmission to offspring of their own hereditary taints, such as insanity and syphilis. Vasectomy, says Belfield, is an office operation; it can be performed in a few minutes under cocain anesthesia, through a skin cut half an inch long; it entails no wound infection, no confinement to bed; it is less serious than the extraction of a tooth.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London

March 13

1 Hernia Strangulated in the Foramen of Winslow. C. A. Morton.
2 *After-Results in a Series of Operations for Radical Cure of Hernia. R. W. Murray.
3 Strangulated Hernia Through the Foramen of Winslow. Operation. Recovery. T. Sinclair.
4 Case in Which Enterospasm was a Pronounced Feature, Necessitating Abdominal Section Four Times Within Ten Months. C. W. Dean.
5 *Diagnosis and Treatment of Chronic Ulcer of the Stomach and Duodenum. A. Thomson.
6 Primary Diffuse Pneumococcus Peritonitis: Treatment by Drainage and Pneumococcus Vaccine: Recovery. H. B. Robinson.
7 Incisions for Operations on the Upper Abdominal Organs. A. Don.
8 Intestinal Obstruction Produced by Enormously Distended Stomach. A. E. Maylard.
9 Physiology of the Female Genital Organs. III:—The Correlation of the Uterus and Ovaries. W. B. Bell and P. Hick.

2. **Hernia.**—Murray describes his after-results in a series of 217 operations for the radical cure of hernia; they are as follows: Twelve months or more after operation 198 operations had proved satisfactory; 12 patients were unaccounted for; 3 had relapsed and 4 had died. He uses these figures as an argument in favor of the saccular, or congenital, origin of hernia. He describes separately his methods of operating in inguinal, femoral and umbilical hernia, and says that if results such as he records can be obtained by an operation which essentially and almost entirely consists in the complete removal of the sac, this surely is strong evidence in favor of the sac being the essential cause of the hernia, and is also an encouragement to surgeons to simplify their methods when operating, to pay less attention to repairing the abdominal wall and more attention to the complete removal of the sac.

5. **Chronic Ulcer of the Stomach and Duodenum.**—Thomson analyzes a consecutive series of fifty cases in which a chronic ulcer of the stomach or duodenum was not only diagnosed clinically but was subsequently demonstrated at operation. He discusses the site, sex incidence, age range, remissions, pain, relation of pain to taking of food, tenderness, vomiting, hemorrhage, the use of the test meal, constipation, visible peristalsis and hour-glass cases. While Thomson believes hyperacidity to be an essential factor in the production of an ulcer, he does not believe it to be the cause of the pain, which he considers due to the movements of that part of the stomach in which the ulcer is situated. The hunger pain of duodenal ulcer he considers due to the fact that as the stomach empties, the pylorus tends to move toward or even to the left of the middle line, thus putting traction on the duodenum and causing pain or discomfort in the presence of an ulcer. He discusses the diagnosis of chronic ulcer of the stomach and duodenum from gastric neuroses, carcinoma in the stomach, and carcinoma in the vicinity of the stomach. Chronic ulcer can only be cured by surgical means. Operation is recommended because the ulcer will not get well otherwise, because it causes suffering and prevents earning a living, and because it may become dangerous to life through starvation, hemorrhage, perforation or transformation into cancer. Resection has only a limited field; it is always difficult and dangerous. It was done in 3 cases with 1 one death. Gastroenterostomy was done in 47 cases with 3 operation deaths. Of those who survived the operation, 1 was lost sight of, 5 died at various periods, from different conditions, and the remaining 38 are all under observation and their physicians in most cases speak in enthusiastic terms of the benefits derived from operation.

Lancet, London

March 13

10 *Disinfection and Disinfectants. R. T. Hewlett.
11 *Mechanism Underlying the Various Methods of Artificial Respiration. A. Keith.
12 Tabes Dorsalis with Unilateral Anesthesia: A Contribution to the Pathogenesis of the Disease. H. T. Thompson.
13 Hydrochloric Acid in the Gastric Contents in Cancer. S. M. Copeman and H. W. Hake.
14 Medical Ionization: Its Uses and Possibilities. N. S. Finzi.
15 *Primary Ovarian Actinomycosis. F. E. Taylor and W. E. Fisher.
16 *Method of Treating Fracture of the Clavicle. F. Romer.
17 Oligohydramnios with Partial Amputation of a Foot Occurring in a Uterus Unicornis. L. C. Blackstone.

10. **Disinfection.**—In the first Milroy lecture, Hewlett reviews the natural processes that bring about disinfection outside the body; dilution, desiccation, filtration, light, heat, crowding out and ammonia in the environment. His experiments show that the violet and ultraviolet rays have a germicidal effect on the *Bacillus prodigiosus*. He discusses dry heat and steam disinfection. Fumigation with sulphurous acid as usually practiced he considers of questionable utility. Formaldehyd, when properly applied, is probably more active than sulphurous acid, and chlorin gas still more so, though it is difficult of use. Spraying and washing with solutions he considers preferable to fumigation. He would like to see two groups of schools used for tests of the comparative value of disinfectants and spraying with water and washing. Disinfectant powders are chiefly of value as deodorants. He summarizes the requirements of an ideal chemical disinfectant as follows:

1. The substance must be cheap.
2. It should be relatively non-poisonous.
3. It should have no corrosive or other action on the ordinary metals and it should not stain linen, etc.
4. It should not separate into layers on standing, and should run freely from the containing vessel at all times.
5. It should possess high germicidal power.

6. It should be miscible with ordinary water in all proportions, to form a stable solution or homogeneous emulsion which should not separate appreciably into layers on standing.
7. It may with advantage have a solvent power for grease, for greasy surfaces have often to be disinfected.
8. Its germicidal power should not be markedly reduced in the presence of organic matter.
9. Heating to a moderate temperature should not affect it, so that it may be used hot if desired.

11. **Artificial Respiration.**—In the first Hunterian lecture, Keith reviews the methods of artificial respiration from 1774. He discusses the methods advised by the Royal Humane Society, those previously in use in England and on the continent, the experiments and recommendations of John Hunter, De Haen, Fothergill, Goodwyn, Kite, Brodie and Erichsen. He cites the recommendations of Cullen and the use of bellows and tobacco fumes; and describes the condition of the lungs in asphyxiation, contrasting inflation of the lungs with natural breathing.

15. **Primary Ovarian Actinomycosis.**—Taylor and Fisher say that only six cases for actinomycosis of the ovary are on record, and none of these are primary. They report a case of the primary disease. The patient had lived in London for 16 years, but in 1903 and 1904 was brought into contact with hay, straw and corn, the usual sources of actinomycosis, and it is noteworthy that the symptoms date from 1904. Since the ovary occupies a secluded position in the closed abdominal cavity, it can only be infected either by the direct extension of disease from an affected contiguous organ or by the blood stream. As in this case there was no evidence of disease in any adjacent organ, the streptothrix must have reached the ovary by way of the blood stream, the mode of entry into the body being, they suggest, some cryptogenic focus—e. g., the tonsil, through which it is well known microorganisms may pass into the blood stream without producing any local lesion.

16. **Fracture of the Clavicle.**—Romer describes the following method of treating fracture of the clavicle without confining the arm to the side: "Three strips of firm adhesive plaster, each an inch and a half in width should be applied, from a point immediately above the nipple to a point below the angle of the scapula. The middle strip should cover the seat of the fracture and should be first applied; the lateral ones, slightly overlapping it, should extend about an inch and a half on either side. Each strip should first be made to adhere strongly in front, and, while it is supported and fixed by the fingers of one hand, should be carried over the shoulder by the other, with steady pressure, and made to adhere as it goes." It is advisable to apply another strip to encircle the shoulder joint, one end being brought diagonally across the scapula to below its angle. A thin layer of wool should be placed in the axilla. The strapping once applied the patient can dress in the ordinary way, the arm of the injured side being supported by a sling.

Clinical Journal, London

March 10

18 Aneurism. A. A. Bowlby.
19 Occult Primary Cardiac Hypertrophy. H. B. Shaw.
20 Intrathoracic Growths. C. Wall.

Medical Press and Circular, London

March 10

21 Present Position of Intravenous Treatment. F. Mendel.
22 Surgical Aid in Chronic Ulcer of the Stomach. J. A. Nixon.
23 The Feeding of Infants with Undiluted Citrated Milk. F. Langmead.
24 Chronic Edemas Due to Local Degenerative Changes. F. P. Weber.
25 Ionization in Treatment of Skin Disease. E. G. Little.

Practitioner, London

March

26 Points in Diagnosis and Treatment of Derangements in the Knee Joint. A. E. Barker.
27 Dr. Marshall Hall and the Decay of Bloodletting. D'A. Power.
28 Uterine Hemorrhages. F. E. Taylor.
29 Acute Infection of the Kidney by the *Bacillus Coli Communis*. G. Wright.
30 *Injection of Broad Ligaments with Quinin for Prolapsus Uteri. J. I. Parsons.
31 Resection of Large Lengths of Small Intestine for Gangrene. C. P. Childe.
32 Present State of our Knowledge of Pemphigus. J. M. H. MacLeod.
33 Retrospect of Otology. M. Yearsley.
34 Appendicitis in General Practice. G. McKerrow and J. S. Geikie.
35 Treatment of Relapsing, Recurrent and Chronic Appendicitis. J. Allen.
36 Principle of Proportional Representation in Clinical Radiography. W. Cotton.
37 Hodgen's Splint in Private Practice. G. C. F. Robinson.

30. **Prolapsus Uteri.**—Parsons rejects the view that the pelvic floor and intra-abdominal pressure are chief factors in supporting the uterus. He considers the important factor to be, as stated by Dr. H. Savage, in 1882, the connective tissues running from the side of the pelvis with the vessels to the side of the uterus. The ideal treatment would be some method of strengthening these ligaments, rather than of creating a new one by attachment to the abdominal wall. From observation of the fact that subcutaneous injection of quinin in malaria produced effusion and caused a swelling that remained for months, it occurred to him to try the effect of irritating the cellular tissue of the ligaments with quinin, so as to produce an effusion of lymph that should form new connective tissue. He describes his technic as follows: Before the operation is performed, the bowels are thoroughly cleared out and the vagina is douched with a 1 to 2,000 solution of perchlorid of mercury. An anesthetic is advisable, although the operation takes only a few minutes. A bladder sound is passed and the extent to which it falls down on each side of the uterus is noted. A Sims speculum is then inserted, to hold down the posterior vaginal wall, and a retractor, to hold up the anterior vaginal wall; it should be wide enough to draw the bladder well up and out of the way. A straight sound is then passed into the uterus and held horizontally by the left hand of the operator, while the syringe containing the solution is held in the right hand. The injection is made with a needle 1 inch long on each side of the uterus through the vaginal wall at a distance of ¾ of an inch from the cervix, and a little below the level of the external os. If the cervix is much enlarged, which often happens in prolapsus, the point of injection should be nearer to the cervix. The aim of the operator should be to insert the needle exactly half way between the position of the normal cervix and the pelvic wall; then the nearest portion of the uterine artery and veins and the ureter lie to the right of the needle and above it. Another point is that, in the outer half of the broad ligament in this situation, there are no veins of importance. In cases of chronic procidentia, it is advisable to inject somewhat lower, on account of the tendency of the bladder to pouch down on each side of the cervix. The needle is apt to be corroded by the acid in the solution, and should therefore be tested before use, and thoroughly washed out afterward in warm water. A cup-and-stem rubber vaginal pessary is then inserted, and secured by tapes to a band around the waist. After three days it may be removed. The patient is instructed to lie on her face or side as much as possible. The bowels should be kept open every day, but free purging must be avoided. Cinchonism is rare. The exact solution is 12 grains of the ordinary sulphate of quinin, dissolved in 30 minims of dilute sulphuric acid, and 30 minims of distilled water. It should be made fresh for each patient. As the space on the left side is encroached on by the rectum, Parsons usually injects 10 minims less on that side than on the right. Repair of the perineum if necessary, adds very considerably to the comfort of the patient and also helps the ligaments. Taking all the easiest cases and also the most difficult, the latter forming by far the larger proportion, and including a great many cases of chronic procidentia, Parsons finds that in 75 per cent. the uterus has kept up permanently, 20 per cent. were greatly improved, and in 5 per cent. the measure failed.

Dublin Journal of Medical Science

March

38 A Year's Mental Hospital Work. W. R. Dawson.
39 Some Cases of Gastric Surgery. W. Taylor.
40 *Upland Surface Water as a Carrier of Lead. H. English.
41 Hand Sterilization (concluded). C. G. Cumston.

40. **Upland Surface Water as a Carrier of Lead.**—English refers to the solvent-properties of water on lead piping, and points out that all waters, except those containing alkaline carbonates, phosphates, silicates or sulphates, possess this

solvent action. These salts, when present, however, combine with the dissolved lead, forming an insoluble compound, which coats the pipe and prevents further erosion. Upland surface water is rich in a material called humic acid, which is derived from decomposing vegetable matter in the collecting ground. This material aids the solution of lead from the pipes, and in one case a certain town consumed such water for a large number of years, with an average of no less than from 4 to 5 grains of lead to the gallon. English then discusses in detail the pathology, symptomatology and treatment of lead poisoning.

Journal of Tropical Medicine and Hygiene, London

March 1

42 Goundou in the West Indies. C. W. Branch.
43 *Etiology and Treatment of Beriberi. P. Van Andel.
44 Three Cases of Infection by *Schistosomum Japonicum*. E. C. Peake.
45 Hemogregarines of Snakes (concluded). L. W. Sambon.

43. **Beriberi.**—Van Andel's two points are: (1) That beriberi may be cured without removal of patients from the endemic area, and by attention to diet, a leguminous diet being recommended; and (2) that the induction by the use of drugs of cardiac irregularities suggesting beriberi, in areas where the disease prevails, is a possibility to be borne in mind.

Indian Medical Gazette, Calcutta

February

46 Tuberculous Diseases in India. G. A. Harris.
47 Gleanings from the Calcutta Postmortem Records. L. Rogers.
48 Ozone as a Water-Purifying Agent in India. D. Munro.
49 *Biliary Cirrhosis of Children, Otherwise Known as Infantile Liver. F. Pearse.

49. **Biliary Cirrhosis of Children.**—Pearse describes a peculiar disease of the liver in infants, attended with high mortality, that has been noted for some years in Bengal. Postmortem, the kidney shows marked degeneration and shedding of the epithelium, and there are edema of the feet and legs, possibly of face and hands, and some fluid in the abdomen. All the tissues are bile stained. In early stages the liver is enlarged; later it is small; there is no perihepatitis, but the liver is tough and granular. In the interlobular bands many bile ducts are found. The degenerated liver cells lie loosely in a network formed by the intercellular fibers, and there is no evidence of syphilis. The disease is limited to children between six months and two years of age. Its onset is insidious, and seems to run in families. It occurs among rich and poor, and among infants fed both by the mothers and in other manners. It may last from one month to two years. There are enlargement of the liver, nausea, loss of appetite, vomiting, sallow complexion, thirst and fever. Edema occurs in the latter stages. The stools are clayey and the urine is deeply stained. The author concludes that it is a parasitic disease, but whether microbic or due to large forms there is no evidence to show.

Annales de Gynécologie et d'Obstétrique, Paris

February, XXXVI, No. 2, pp. 65-128

50 *Polyneuritis during Pregnancy. (Cas de polynévrite pendant la grossesse.) L. -A. Krivsky.
51 Two Cases of Vaginal Cysts Originating in the Wolffian Duct. Abadie and Raugé.
52 *Tuberculosis of Bartholin's Gland. L. Lecène.
53 Placental Polyp with Hyperplasia of the Decidua. J.-L. Faure and L. Boidin.
54 The Antisepsis of Abortion. (Antisepsie de l'avortement.) J. Lucas-Championnière.

50. **Polyneuritis during Pregnancy.**—Krivsky relates a case of acute polyneuritis without fever, proving fatal in less than two weeks in a previously healthy young woman, eight months pregnant. The urine had been normal and there was no lead poisoning or other known factor in the etiology. The most plausible explanation seems to be that the trouble was due to autointoxication (Pinard) such as is encountered in uncontrollable vomiting, but in this case there had been only a little nausea and vomiting during a preceding pregnancy and almost none in the present one. Recent sorrow may have possibly contributed. He has found on record only 46 cases of this toxic neuritis in pregnant women, with 9 fatalities. Recent Russian medical literature has contained a number of cases of Korsakoff's psychosis in pregnant women, including one in which the psychosis developed after uncontrollable vomiting. One of the authors, Alexandroff, insists that the same cause is responsible for both the vomiting and the polyneuritis. The symptoms recall those of phosphorus poisoning. The loss of the internal secretion of the ovary may entail the autotoxemia; under normal conditions, outside of pregnancy, it favors the oxidation of toxins containing phosphorus, etc. In the case related, in less than a week the uterus made efforts to expel its contents. Premature delivery was induced with the inflatable bag, after which there was slight improvement in the symptoms of paralysis. The paralysis had commenced with involvement of the motor nerves spreading to the pneumogastric and phrenic nerves but sparing the functions of the bladder and rectum.

52. **Tuberculosis of Bartholin's Gland.**—Lecène gives the details of 2 cases, the only ones of isolated tuberculous bartholinitis of which he has knowledge.

Annales Générales de Médecine, Paris

February, LXXXIX, No. 2, pp. 65-128

55 Mesenteric Cyst. (Cas de kyste dit du mésentère.) B. Cunéo.
56 *Therapeutic Action of Adrenalin applied to the Skin. G. Sardou.
57 Previous State of the Health in Industrial Accidents. (L'état antérieur dans les accidents du travail.) E. Dabout.
58 Serodiagnosis of Syphilitic Nature of Certain Cases of Cirrhosis of the Liver. (Diagnostic de la nature syphilitique de certaines cirrhoses du foie par la séro-réaction de Wassermann.) C. Esmein and M. Parvu.
59 Post-traumatic Galloping Sound. (Bruit de galop post-traumatique.) P. Londe.

56. **Local Action of Suprarenal Preparation Applied to the Skin.**—Sardou summarizes out of a much more extensive experience in the last six years fifty-four cases to show the remarkable benefits that may be realized from the simple measure of painting the skin with adrenalin. Among the conditions treated were toxic erythemas, urticaria, acne, sunburn, bee sting, eczema, pruritus, nevus, contusion, inflamed chilblains, headache and congestion of the face from indigestion, sciatica without neuritis, arthralgia, arthritis, varices, etc. The adrenalin applied to the skin is rapidly absorbed and acts on the vessels in the region. Durable vasoconstriction is obtained by a moderate, graduated application of the adrenalin, renewed according to the effects produced. Too large a dose, at first, paralyzes the reaction. Hemorrhoids are benefited when moderate and recent unless they are the result of portal hypertension. The measure may also fail on account of sclerosis and paresis of the walls of the vessels. The effects of the adrenalin are similar to those of constriction hyperemia. There is no doubt that the adrenalin is able to act in the depths of the tissues and to aid their defensive efforts, or the adrenalin may arouse them to more effective resistance. Applied locally, it re-enforces the local defenses without waiting for general reactions, the outcome of which it is impossible to foresee.

Archives des Maladies du Cœur, etc., Paris

February, II, No. 2, pp. 65-127

60 Adams-Stokes Syndrome with Bigeminal Rhythm. E. Barié.
61 *Paralysis of Left Inferior Laryngeal Nerve in Affections of Mitral Valve. W. Osler.

61. **Paralysis of the Left Laryngeal Nerve in Mitral Affections.**—Osler has encountered three cases of laryngeal paralysis in the course of a mitral affection, and relates the details. The symptoms suggested the presence of an aneurism; in one case the stretch of the recurrent nerve compressed between the wall of the auricle and the aorta was whiter and more opaque than the rest of the nerve.

Archives de Médecine des Enfants, Paris

March, XII, No. 3, pp. 161-240

62 Human Contagion the Main Factor in Tuberculosis in Children. (Rôle de la contagion humaine dans la tuberculose infantile.) J. Comby.
63 Influence of Condition of Health of Dairy Employées on Healthfulness of Milk. (Influence de l'état de santé des laitières sur la valeur du lait alimentaire.) Moussu.
64 *Triangle of Dulness as Sign of Serofibrinous Pleurisy in Children. (Sur le signe du triangle de Grocco-Rauchfuss-Hamburger.) J. Brudzinski.

64. **Paravertebral Triangle of Dulness in Pleurisy in Children.**—Brudzinski warns that the extreme elasticity of the thorax in children must be borne in mind in examining for this sign. Although it is not pathognomonic of serofibrinous pleurisy, yet its presence in connection with other signs and symptoms of pleurisy he regards as important confirmatory evidence. He cites a few typical cases to show the technic and theorizes to explain the causes which cooperate in producing the area of dulness.

Bulletin de l'Académie de Médecine, Paris

March 2, LXXIII, No. 9, pp. 265-293

65 Rail Connection with Mecca from the International Sanitary Standpoint. (Le chemin de fer du Hedjaz au point de vue sanitaire international.) A. Chantemesse and F. Borel.
66 Hereditary Atrophy of the Papilla of the Optic Nerve. F. Raymond.

Presse Médicale, Paris

February 27, XVII, No. 17, pp. 145-152

67 History of Case of Facio-scapulo-humeral Atrophic Myopathy under Observation for 30 Years. L. Landouzy and L. Lortat-Jacob.
68 Treatment of Lupus of the Face. De Beurmann and Degrais.

March 3, No. 18, 153-160

69 Aneurism of Hepatic Artery. T. Tuffier.
70 Symptoms of, and Indications in, Abdominal Contusions. Dehelly and Lagane.

Revue de Médecine, Paris

January, XXIX, No. 1, pp. 1-80

71 *Granulation of the Erythrocytes. Staining Methods. (Les hématies à granulations. Procédés de coloration. Valeur séméiologique.) N. Fiessinger and F. Abrami.
72 *Congenital Family Cholemia. (Pathogénie de l'ictère acholurique congénital.) W. Starklewicz.

February, No. 2, pp. 81-160

73 *Experimental Reproduction of Tuberculous Cirrhosis of the Liver. H. Gougerot.
74 *Interlobar Serofibrinous Effusions in the Tuberculous. (Les épanchements sero-fibrineux de l'interlobe.) C. Sabourin. Commenced in No. 1.

71. Reviewed editorially April 3.

72. This condition was discussed editorially in THE JOURNAL, March 6, page 776.

73. **Experimental Reproduction of Cirrhosis of the Liver.**—Gougerot states that he has succeeded in reproducing in guinea-pigs all the various processes of human tuberculous hepatitis. Some of them were reproduced to their finest details, especially the forms of cirrhosis with hypertrophy and atrophy. All the evidence presented confirms the rôle of the tubercle bacillus in the development of such affections in man. The tuberculous nature of certain forms of cirrhosis, formerly attributed to alcohol, is fully established by the research related in which he inoculated animals with pure cultures of the tubercle bacillus and cirrhosis of the liver developed in consequence, the series being too numerous to be ascribed to mere chance. The experiments show that the tubercle bacillus alone, without the aid of alcohol, is able to induce typical cirrhosis of the liver.

74. **Interlobar Effusion in the Tuberculous.**—Sabourin reviews his experience with fifteen cases of pulmonary tuberculosis in which an interlobar effusion developed. There seemed to be always a tendency to spontaneous reabsorption and to a cyclic course, suggesting a possible tuberculous embolism as the cause. Treatment can be only expectant, ready to remove the effusion if it causes symptoms or if absorption is too long delayed. The area of dulness is suspended, as it were, with resonance above and below, or it may be like a scarf crossing the lung area, narrow above and toward the median line, widening below and outward. Besides the usual symptoms of pleurisy, the area of dulness may be tender and the liver may be pushed downward and the heart toward and beyond the sternum.

Semaine Médicale, Paris

March 10, XXIX, No. 10, pp. 109-120

75 *Phlegmonous Enteritis. L. Cheinisse.
76 *Arm and Eye Syndrome in Advanced Mammary Cancer, and Contraindications for Operation. (Le syndrome brachio-oculaire dans le cancer du sein comme contra-indication de l'intervention chirurgicale.) I. Kiproff.

75. **Phlegmonous Enteritis.**—Cheinisse states that one Russian clinician reports five cases of this rare affection encountered since 1899, and he reviews this and other material from the literature describing the clinical picture in detail. The disease seems to have a predilection for the first part of the jejunum and for the duodenum, the regions unable to slide out of the way in case of external trauma or of excessive intra-abdominal pressure. Trauma affecting the abdomen is usually felt most severely in this region. Streptococci were isolated from the lesions in all the cases in which bacteriologic examinations were made, plus the staphylococci in one case. A preceding acute catarrhal enteritis was observed in some cases and in Moiseev's four cases there was a concomitant acute sore throat or gastritis. The clinical picture of phlegmonous enteritis is about the same as of phlegmon of the stomach, with the difference that the reaction on the part of the peritoneum is so prompt and so intense that it is liable to mask the phlegmon in the intestinal wall or even to precede its actual development. The peritoneal reaction is particularly rapid and intense when the phlegmonous inflammation is located in the jejunum. When a laparotomy fails to reveal any explanation of the symptoms in abdominal trouble, the possibility of this affection should be borne in mind. Treatment should be along the same lines as for phlegmonous gastritis.

76. **Arm and Eye Syndrome with Mammary Cancer.**—Kiproff describes a case of cancer of the breast in which the compression or involvement of the nerves was revealed by paralysis and sensory disturbances in the nerves of the forearm associated with ocular disturbances, ptosis of the lid, sinking in of the eyeball, dilatation of the conjunctival vessels and myosis. These symptoms reveal localization of the malignant process in the inner, deeper part of the supraclavicular fossa, and warn that metastases of the mammary cancer must be sought in this region.

Archiv für klinische Chirurgie, Berlin

LXXXVIII, No. 3, pp. 631-902. Last indexed March 13, p. 929

77 *False Incarceration of Hernias. (Die Scheineinklemmung von Brüchen.) P. Clairmont.
78 *Suture of Arteries. (Arteriennaht.) A. Smith.
79 Suture of Stab Wounds of Lung. (Naht bei Stichverletzungen der Lunge.) L. Stuckey.
80 Review of 2,009 Cases of Fractures Treated at Berlin Polliclinic. P. Bartsch.
81 Case of Traumatic Aphasia with Right Hemiplegia in a Left-Handed Boy. Recovery after Trephining. H. Miyake.
82 *Extirpation of Tumors in Motor Area of Brain. (Zur Extirpation der Gehirntumoren in den motorischen Rinden centren.) Id.
83 *Tuberculosis of Spleen. (Milztuberkulose.) H. Strehl.
84 *Operative Treatment of Paraplegia in Tuberculous Spondylitis. M. A. Wassiliew.
85 *Carcinoma of Bladder in the Young. (Das Blasencarcinome im jugendlichen Alter.) S. Hadda.

77. **Pseudoincarceration of Hernias.**—Clairmont, assistant at Eiselsberg's clinic at Vienna, applies the term *Scheineinklemmung* to the cases of hernia in which the symptoms of incarceration of the hernia persist after apparently successful reduction of the hernia. In ten such cases at the clinic seven terminated fatally. This experience shows the variety of affections which may lead to obstruction of the bowel. A hitherto free hernia may suddenly become irreducible, painful and tender, and may show less or increased tension. If symptoms of ileus develop at the same time, incarceration of the hernia is generally assumed and attempts at reduction may be made. If the taxis succeeds, the patient is supposed to be cured and no other cause is sought for the ileus. Or the hernia may resist reduction and unusual findings at the herniotomy may suggest the possibility of a second occlusion of the intestine at some other point. The dangers of these cases are so manifold that Clairmont devotes nearly 100 pages to the subject, summarizing from the literature all the similar cases he can find—a total of 107. In one group the ileus was the result of incarceration of a second hernia, internal or external, in other groups to compression from kinking, volvulus or invagination, a foreign body, benign or malignant stenosis or peritonitis from pancreatitis, appendicitis, trauma or extrauterine pregnancy. The prognosis depends on early differ-

entiation and correct surgical intervention. The cases of this kind in the literature are listed as "consecutive incarceration" or "consecutive strangulation," "combination ileus," "relative" and "pseudoincarceration," and his own term, "sham incarceration."

78. **Suture of Arteries.**—Smith gives an illustrated description of experimental research on the suturing of arteries, showing the points to be avoided and the development of the technic which he finally recommends.

82. **Extirpation of Brain Tumor in Motor Area.**—Miyake reports a case in which he removed an encapsulated glioma from the motor area for the left leg without injury of the brain, and the patient has been entirely cured with no appreciable symptoms during the three years since. He was a man of 27 and the first slight symptoms of the tumor were noticed six years before the operation. The outcome was equally good in a second case in which a gumma in the left central convolution was removed after fifty days of energetic antisyphilitic treatment had failed to induce any improvement. The patient rapidly recovered and is practically cured, only a few traces of the previous disturbances being still apparent. The symptoms in this case had been noted for two years, commencing with sudden paralysis of the right leg, slight syncope and intense headache, with Jacksonian epileptic seizures coming on after about twenty months.

83. **Tuberculosis of the Spleen.**—Strehl reports a case of isolated tuberculosis of this organ developing insidiously during twelve months and then attracting attention by the enlargement of the spleen and disturbances from adhesions between it and the stomach and abdominal wall, sensations of oppression in the region, loss of appetite, emaciation and weakness. Splenectomy has been done ten times for tuberculosis, with four deaths, but the fatalities should not be attributed to the operation. In one case on record the spleen was merely incised and sutured to the abdominal wound, the patient being completely cured by this simple procedure. Strehl adds that tuberculosis in other organs contraindicates splenectomy, but that incipient involvement of the peritoneum may retrogress, as it frequently does after nephrectomy for tuberculosis.

84. **Operative Treatment of Paraplegia with Tuberculous Spondylitis.**—Wassiliew has operated in six cases and the patients were cured in four of the five cases in which he opened up the prevertebral space. One patient lived nine years and another is healthy to date after four years. The best results were obtained with Ménard's "costotransversectomy"; this reaches the seat of the lesion better than laminectomy. The ends of one or two ribs and the attached transverse processes of the vertebræ are resected and access is thus obtained into the posterior mediastinum. Ménard does not lay much stress on curetting the vertebræ but restricts the operation to removal of pus, cheesy masses and sequesters, with subsequent drainage. Wassiliew operated as soon as the paraplegia developed when other vital organs were not involved, not waiting for conservative measures.

85. **Carcinoma of the Bladder in Youth.**—Hadda comments on the rarity of carcinoma in youth—only 0.42 per cent. occurring under 20 in 7,330 cases of carcinoma at fourteen clinics. In 5,006 cases of carcinoma at all ages, less than 1 per cent. were located in the bladder and none was in a patient under 20. He describes a case in a clerk, 19 years old, with bladder symptoms apparently cured by removal of a large concrement. There were no further disturbances for five years, but the symptoms then recurred and an inoperable carcinoma was discovered. The prognosis is more unfavorable the younger the patient.

Beiträge zur Geburtshilfe und Gynaekologie, Leipsic

XIII, No. 3, pp. 339-496. Last indexed March 20, p. 1001

86 Causes of Coagulation of Fibrin and Formation of Infarcts in the Human Placenta. (Genese der Fibringerinnungen und Infarktbildungen der menschlichen Placenta.) B. Huguenin.
87 *Endometritis. G. Schickele.
88 Streptococci in the Vagina. (Zur Vaginalstreptokokkenfrage.) E. Konrad.
89 Repeated Publotomy on Same Patient. (Wiederholte Heboste-otomie.) O. Hoehne.
90 *Obstetrical Chair. (Ein Hängelage-Geburtsstuhl.) R. Pfisterer.
91 Metastases of Uterine Carcinoma in the Heart. (Metastasen im Herzen bei Uteruskarzinom.) H. Offergeld.
92 *Hemorrhage in the Eye in the New-born. (Blutungen ins Auge bei Neugeborenen.) M. Stumpf and von Sicherer.
93 Teratomas in Thyroid Region. (Teratome der Schilddrüsengegend.) H. Hunziker.

87. **Endometritis.**—Schickele comments on the frequent finding of normal mucosa when the uterus is curetted for supposed endometritis, and reaffirms that much that is taken for endometritis is in reality nothing more than the natural premenstrual congestion. At the same time he presents evidence to prove the existence in some cases of glandular changes which are really pathologic, and have nothing to do with menstrual congestion. In other cases, the mucosa may be chronically congested in consequence of displacement of the uterus or of inflammation in the adnexa, or is primarily affected. Chronic congestion in the uterus from inflammation in the adnexa leads to overnourishment of the glands and they become hypertrophied and functionate to excess, increasing the discharge, which thus is one of the most constant signs of endometritis. The menstrual flow comes on earlier and lasts longer than normally and may become irregular. In a recent case the patient presented phases of excitement alternating with periodical psychic depression, evidently traceable to vasomotor disturbances. Since she has been in this condition the menstrual periods have lasted longer and they come on irregularly, while the flow has been more profuse. Frequent curetting failed to modify the condition—the flow is becoming constantly more profuse, but the scrapings still show normal tissue. Curettement fails to benefit in such cases as this, or has merely a transient effect. It is important to curette once in all such cases, but if the primary trouble is not cured the same sequence of disturbances will occur again later. In conclusion, Schickele emphasizes the fact that the changes in the mucosa observed in many conditions of chronic inflammation in the adnexa with uterine affections and displacements and with general vasomotor disturbances are in reality secondary. Chronic hyperemia or lasting congestion in the interglandular tissue predominate here, distinct from changes in the glands themselves.

90. **Obstetrical Chair.**—The chair described is more like a table on which the woman lies with the region of the perineum at the apex of the obtuse angle formed by the legs slanting downward at an angle of 130 degrees. The hyperflexion of the front part of the pelvic ring in the sacroiliac joint is the main factor in the benefit derived. Between the uterine contractions the feet rest on a cross-bar and during the labor pain the woman grasps handles attached to the frame of the chair to aid in straining. He gives an illustration of the chair and reports two cases to show the convenience and help of the chair as it is in use at von Herff's clinic at Basle.

92. **Hemorrhage in the Eye in the New-Born.**—Stumpf and von Sicherer noted hemorrhage in the retina or optic nerve in 42 out of 200 children examined soon after birth. It seems evident that the stress of delivery is able to induce hemorrhage by the changes and congestion induced by the birth act. The trouble is generally the result of interference with the circulation, and he questions the after-fate of children with this hemorrhage in the eye, querying whether it might not lead later to the development of a glioma. The hemorrhage is probably the result of pressure on the head from the soft parts of the birth passage. It is particularly liable to occur in case of existing asphyxia or premature delivery, as in such cases the blood vessels are peculiarly fragile, not having reached their full development.

Berliner klinische Wochenschrift

March 1, XLVI, No. 9, pp. 381-428

94 Cardiovascular Symptoms with Goiter. (Kropfherz.) W. Scholz.
95 Reform in Treatment of Placenta Prævia. L. Blumreich.
96 *Frequency of Tuberculosis in the Cadavers at the Berlin Pathologic Institute. (Häufigkeit der Tuberkulose am Leichenmaterial.) H. Beitzke.

97 Congenital Defects. (Zur Diagnose der kongenitalen Vitien.) J. Plesch.
98 Questionable Importance of the Ocular Reaction for Prognosis of Tuberculosis in Pregnancy. (Hat die Ophthalmoreaktion für die Prognosenstellung bei der Tuberkulose der Schwangeren Bedeutung?) S. Kaminer.
99 *Constitution and Physical Development. (Konstitution und Körperform.) R. Lennhoff.
100 The Phagocyte Count as Means of Determining the Action of Tonics, etc. (Eine neue biologische Methode zur Bestimmung des Wertes von organischen Präparaten.) Piorkowski.
101 Serodiagnosis of Syphilis with Active and Inactive Serums. (Die Wassermann'sche Reaktion bei "aktiven" und "inaktiven" Sera.) H. Boas.

96. **Frequency of Tuberculosis in Hospital Cadavers.**—Beitzke gives comparative tables showing the proportion of cases in which tuberculous lesions are discovered at autopsy in various cities. At the Berlin Pathologic Institute tuberculous lesions were found in 13.6 per cent. of 397 child cadavers, or, excluding the new-born, in 27.3 per cent. of 198 children, and in 41.8 per cent. of 703 adult cadavers. The general average thus for all ages is 13.9 per cent., or, excluding the new-born, 16.9 per cent. Naegeli's statement that nearly every adult has or has had tuberculosis, should be modified, Beitzke thinks, to refer only to the hospital material in large cities. It certainly does not apply to the population at large. It would be much nearer the truth, he is convinced, to say that about 50 per cent. of all adults have or have had some tuberculous lesion.

99. **Tendency to Ptosis and Shape of the Body.**—Lennhoff states that the distance between the neck and the symphysis, divided by the waist measure and multiplied by 100, to eliminate fractions, gives an index which is useful in studying the causes for visceral ptosis, predisposition to tuberculosis, etc. The range is between 60 and 115. The higher the index the greater the tendency to visceral ptosis, but the shape of the body alone is not enough to cause the ptosis. He gives a number of illustrations of modern and antique sculptors' models, with the index for each. The Venus of Milo has an index of 61, the Capitoline Venus 64, the Esquiline Venus 68; the index for twenty-four healthy young Samoan women ranged from 66 to 91, while for the contemporaneous sculptors' models it varied between 75 and 81.

Deutsche medizinische Wochenschrift, Berlin

March 4, XXXV, No. 9, pp. 377-424

102 Chronic Catarrh of Upper Air Passages. (Behandlung des chronischen Katarrhs der oberen Luftwege.) A. Hartmann.
103 *Serodiagnosis of Syphilis. F. Lesser. Id. (Klinische Verwertung der Wassermannschen Reaktion.) A. Blaschko.
104 Antitrypsin Test in Anemia. (Die Kachexiereaktion in Vergleich zum Hämoglobingehalt und zu den Formelementen des Blutes bei Anämien und deren Beeinflussung durch natürliches Arsenwasser.) F. Brenner.
105 Etiology of Appendicitis. (Zur Entstehung der Wurmfortsatzentzündungen.) C. Haeberlin.
106 Two Cases of Angioma of the Face or "Elephantiasis mollis angiectodes." (Zwei Blutgefässgeschwülste des Kopfes.) A. Siegmund.
107 Examination of the Lungs in Apical Tuberculosis. (Zur Untersuchung der Lungen bei Spitzentuberculose.) G. Richter.

103. **Serodiagnosis of Syphilis.**—Lesser has applied the Wassermann test in more than 2,000 cases of syphilis and in hundreds of controls. He tabulates the findings under various headings, calling attention to the 100 per cent. of positive reactions in his 62 cases of progressive paralysis, and the change from positive to negative findings under energetic mercurial treatment while this never occurred under treatment with atoxyl. He obtained a positive response to the test in only 56 per cent. of his 61 cases of tabes; the syphilis itself may have long since been completely cured before the tabes develops, although the syphilis is the source of the process in the meninges which entails secondary degeneration of the nerve tracts with tabes as the outcome. One of the most interesting points learned in this research is that treatment must be more intense than is at present customary in order to transform the positive response to the test into a negative. The transformation of positive into negative findings was obtained only in 35 per cent. under ordinary dosage, and in a number of cases in which the reaction had become very faint under this dosage it had become positive again when the test was applied a few weeks later. He asserts that it is necessary to continue treatment until the hemolysis in the test occurs promptly; as long as it is sluggish, treatment is required. He was never able to transform a positive into a negative reaction in children with inherited syphilis, and alcohol seems to interfere in the same way with the transformation of positive into negative findings. He succeeded in some cases in obtaining this transformation under potassium iodid. The proportion of positive responses obtained in the cases with primary sore was 69 per cent.; in the early phase with symptoms, 91 per cent.; without symptoms, 67 per cent.; in the tertiary phase with symptoms, 90 per cent.; without symptoms, 46 per cent.; in tabes, 56 per cent., and in paralysis 100 per cent. In reference to the question whether a positive response indicates that the patient has syphilis or merely has had it at some time, he points to the remarkable correspondence between the positive findings with the serum test in 46 per cent. of the syphilities in the tertiary stage and the positive pathologic anatomic findings in 49 per cent. of all the tertiary syphilitic cadavers examined at the Moabite hospital during a period of several years. The positive response becomes weaker and weaker under specific treatment, but gradually increases again as treatment is discontinued, to be again attenuated by resumption of the treatment. This certainly seems to indicate that some agent, susceptible to the influence of mercury and iodin, is at work. He has also encountered six cases and Fleischmann three in which syphilitics presented no symptoms and the serum test was also negative, but the recurrence of manifestations of the syphilis was accompanied by positive findings with the Wassermann test. Still more instructive are cases like one reported in which on mere suspicion of syphilis specific treatment had been instituted three years before. On the basis of the positive response to the serum test another course was given, during which a typical syphilide developed. In another case treatment was advised on the basis of the positive findings with the test, and when the patient returned to commence the course, a few weeks later, he presented a number of typical syphilides on the arm, forehead and back. Lesser regards these last cases as supplying the keystone to the structure of the clinical importance of the Wassermann test. In conclusion he shows by his experience that in many cases in which the physician supposed he had given thorough treatment, in reality he had gone only half way to the desired goal. Too much stress has hitherto been laid on the cutaneous manifestations, as they were the only ones accessible. The new test permits insight into the depths.

Blaschko reviews the impressions derived from the test applied about 1,400 times in 1,000 cases. The findings were approximately the same in the syphilities with and without manifest symptoms, and also in the early and the tertiary stages. He believes in continuing treatment, as a rule, until the reaction becomes negative, and also accepts the dictum that treatment should be instituted—even in the absence of clinical manifestations—whenever a positive response is obtained. This requires a longer course of treatment than those generally in vogue. He adds that the great achievements in medicine during the last few years render it necessary for syphilologists to go over the whole field anew by the light of the new discoveries.

Medizinische Klinik, Berlin

February 28, V, No. 9, pp. 309-342

108 Prevention of "Neglected Transverse Presentations"; Injection of Water to Restore the Fluid after Premature Rupture of Bag of Waters. (Zur Verhütung von "vernachlässigten Querlagen" und über Auffüllung des durch vorzeitigen Blasensprung wasserleer gewordenen Uterus.) H. Peters.
109 The Latest Anatomic Findings in the Heart and their Relation to Pathologic Conditions. (Die neueren anatomischen Befunde am Herzen und ihre Beziehungen zur Herzpathologie.) L. Aschoff. (Commenced in No. 8.)
110 *Advantages of Horseback Riding as an Exercise. (Einfluss des Reitsports auf den menschlichen Organismus.) Pickenbach.
111 *Relations between Skin and Kidney Affections. (Beziehungen zwischen Haut- und Nierenkrankheiten.) E. Nohl.
112 Latest Methods of Visual Inspection of Posterior Urethra. (Die neueren Methoden der hinteren Urethroskopie.) G. Praetorius.

113 Dangers of Electric Connection with the Ground. (Gefahren des Erdschlusses.) A. Schnee.
114 Determination of Viscosity of Blood. (Bestimmung der Viskosität des Blutes mittels der Apparate von Determann und Hess, nebst Beschreibung eines eigenen Viskosimeters.) E. Münzer and F. Bloch.
115 Tuberculin and Allied Remedies in Tuberculosis. F. Köhler and R. Lenzmann.

110. **Horseback Riding as an Exercise.**—Pickenbach lauds the advantages of horseback exercise. It acts on nearly every muscle in the body while the mind is interested and refreshed. He repeats in effect Oliver Wendell Holmes' remark that saddle leather would be preferable to sole leather if it were not for the financial objection, but he adds that those who can easily afford this form of exercise are the very ones who need it most and who suffer for the lack of some such stimulation of the oxidation processes. Automobiling is not a sport or exercise, he continues; it does not strengthen the body but has a debilitating effect while ruining the nervous system and injuring the general health. It can not be compared to horseback riding, much less take the place of the latter. He insists that riding outranks all other forms of physical exercise and should be regarded as a direct therapeutic measure for many habitual morbid conditions, especially for the debilitated, the neurasthenic and those with a tendency to melancholia.

111. **Relations Between the Kidneys and Skin Diseases.**—Nohl relates three cases of a peculiar infectious process localized mainly in the skin and kidneys. In the first and second cases the annoying skin affection occupied the center of the stage until examination of the urine revealed the superior importance of the kidney process, which in one case proved fatal. The urinary findings in these three cases emphasize the importance of systematic examination of the urine as a routine measure in erythema exudativum. He has observed a few cases of cystitis and pyelitis accompanying a simple rash in children.

Mitteilungen aus den Grenzgebieten der Med. und Chir., Jena

XIX, No. 5, pp. 737-890. Last indexed March 27, p. 1072

116 *Experimental Research on Spinal Anesthesia. (Experimentelle Untersuchungen zur Spinalanalgesie.) H. Klose and H. Vogt.
117 *Spinal Anesthesia. (Rückenmarksanästhesie.) L. Rehn.
118 Formation of Agglutinins and Hemolysins under Action of Induced Hyperemia. (Ueber Immunkörperbildung unter der Einwirkung der Stauung nach Bier.) C. Kleineberger.
119 *Healing of Tuberculous Process in Lung under Therapeutic Pneumothorax. (Heilung des chronischen tuberkulösen Empyems mittelst künstlichen Pneumothorax.) K. F. Wenckebach.
120 Experiments with Exclusion of Small and Large Intestine. (Versuche über Ausschaltung von Dünn- und Dickdarm.) A. Albu.
121 *Importance of Gastric Hypersecretion from Surgical Standpoint. (Bedeutung des Magensaftflusses für den Chirurgen.) W. Anschütz.

116. **Local Effect of Spinal Anesthesia on Nerve Elements.**—The various findings in tests on 103 rabbits and dogs are reported in detail as observed during and after spinal anesthesia. They were similar to those reported by Spielmeyer last year from research on animals and from postmortem examination of thirteen individuals soon after stovain spinal anesthesia. In one case the stovain was regarded as the direct cause of death. In the experiments of Klose and Vogt the motor cells in some cases showed chromolysis or swelling of the cells with achromatosis—changes resembling closely those observed after severing of the axis cylinder. The cells affected were almost invariably the large motor cells of the anterior and lateral horns. When physiologic salt solution was injected, in place of the anesthetic, no such changes in the cells were apparent, demonstrating that they were not of mechanical origin. Direct injection of the anesthetics into the substance of the cord further confirmed their toxic action. The changes found were evidently reparable in most cases, but a few were encountered in which the nuclei showed such pronounced changes that restitution was manifestly out of the question. None of these changes developed during the first few days after the anesthesia; they were not found until after a few days or weeks. The literature on the subject is reviewed but only the articles of van Lier, Wossidlo and Spielmeyer dwell predominantly on the direct action of the anesthetic on the nerve elements.

117. **Spinal Anesthesia.**—Rehn's article was one of the addresses at the recent International Surgical Congress; he reviews the history and statistics of the method of spinal anesthesia first systematically used by Bier nine years ago. The experimental work reported in the preceding article was done in his clinic to throw further light on the circulation in the cerebrospinal fluid and absorption of drugs from the subarachnoid space and their action on the nerve fibers, and whether the spinal cord is more sensitive to spinal injection of an anesthetic in diabetes, tabes, suppurations, cachexia, etc. His conclusions are that spinal anesthesia is by no means an absolutely harmless measure. Individual differences are uncommonly far-reaching and important. In the elderly, the physiologic hardening of the tissues renders them less sensitive, so that spinal anesthesia is more dangerous the younger the individual. If there is anywhere a place of minor resistance—even latent—the danger is immeasurably enhanced. He summarizes the details of nine cases of severe collapse—one fatal—from Körte's service and three from Brentano's service, with also one fatality. In his own service there were two fatalities in 300 cases. He adds in conclusion that surgeons generally agree in regarding high anesthesia as dangerous and that it is best not to seek to realize it. Also that there is little prospect of localizing the action of the anesthetic in the subarachnoid space; further that spinal anesthesia is not to be recommended for the young, but the changes of age increase the tolerance so that this technic is indicated more for the elderly. It is strictly contraindicated by suppuration, advanced arteriosclerosis, disturbances in the central nervous system, and possibly, also, by widespread tuberculosis. The spinal technic should never be applied when local anesthesia or the first whiffs of ether would have sufficed. Rehn adds that Bier's new intravenous method will certainly limit still further the field of spinal anesthesia. To obtain a correct judgment of this technic a collective inquiry and statistics to include all countries are urgently required. These statistics should include all the circumstances which might prove of importance, even the so-called harmless by-effects.

119. **Treatment of Chronic Tuberculous Empyema by Artificial Pneumothorax.**—Wenckebach states that two out of the three cases reported display the remarkable benefit that may be derived from the simple measure of evacuating the pus and introducing air into the closed chest. The patients were in a threatening condition when he aspirated the pus in amounts up to 2 liters. The rubber tube through which the fluid was aspirated was closed with a stop-cock; the tube was plugged with sterile cotton, the stop-cock opened and air allowed to enter the chest. The patients breathed with a sigh of relief as the oppression and pain ceased. The puncture hole was then closed. The absorption of the air left a partial vacuum and the negative pressure resulting was sufficient to draw out the lung so that it expanded finally and the patients were practically cured. He commends this simple technic to every physician as often an effectual means of treating chronic tuberculous empyema, transforming the pyothorax into a pyopneumothorax, repeating the injection of air at intervals of from three to six weeks. By the end of eleven weeks in his first case there was no further trace of either the pyothorax or pneumothorax, as also after fifteen months in the other case. Air answers the purpose just as well as oxygen, and there is no necessity for complicated apparatus or a mutilating operation. In the third case the results were less favorable, and the experience with this case indicates that success depends on the lung being in contact at some point with the chest wall. He discusses in conclusion other conditions in which this technic might be applied; it seems to promise good results in chronic serous pleurisy and in protracted acute empyema under open treatment. It seems evident that if the wound were closed repeated puncture with admission of air would hasten the healing.

121. **Importance of Gastric Hypersecretion from the Surgical Standpoint.**—Anschütz discusses the influence on operations of chronic gastrosuccorrhea with motor insufficiency, reporting four extreme cases and two of less intensity. Chronic hypersecretion without motor insufficiency is very rare. A gastroenterostomy can be recommended to patients who suffer from frequent recurring disturbances notwithstanding extreme care in the diet and it should not be deferred too long. The acute form of gastric hypersecretion, especially with periodical or intermittent symptoms, is of nervous origin in most cases. In acute dilatation of the stomach with intense hypersecretion a simple gastrostomy may give relief when all other measures fail; the indications are the same as for enterostomy in ileus. In one such case reported, this alone undoubtedly saved the patient. Hypersecretion injures further the already damaged function and deserves the attention of surgeons, especially in severe motor insufficiency and in acute or postoperative stomach disturbances. If excessive secretion is superposed on stenosis of the pylorus, the indications may be more radical than for the motor insufficiency alone. The details of nine of ten cases of hypersecretion interesting the surgeon are given in full.

Monatsschrift für Geburtshülfe und Gynäkologie, Berlin

February, XXXIX, No. 2, pp. 141-264

122 *Tabes Dorsalis in Women during Childbearing Period. (Tabes dorsalis im Geschlechtsleben der Frau.) M. Penkert.
123 Injuries of Intestines in Gynecologic Operations. (Darmverletzungen bei gynäkologischen Operationen.) A. Barth.
124 Intracellular Streptococci in Puncture Fluid. (Ueber einen seltenen Befund von intrazellulären Streptokokkenketten im Spinalpunktat.) E. Sachs.
125 *Experimental Study of Treatment of Puerperal Fevers. (Zur Behandlung des Puerperalfiebers.) W. Zangemeister.
126 Indications for Operation in Chronic Inflammatory Affections of the Ovaries and Fallopian Tubes. L. Prochownick.
127 Unusual Metastases of Uterine Carcinoma in Muscles, Ureters, Glands, and Mediastinum. H. Offergeld.

122. **Tabes During the Childbearing Age.**—Penkert has found eight cases on record of pregnancy in women with tabes, mostly in an advanced phase, and has encountered a case in his own practice. His patient was a i-para of 27, free from acquired syphilis but with a possible paternal heredity. After the commencement of the pregnancy lancinating pains recurred regularly every two or four weeks, followed by ecchymoses on the legs and intense gastric crises. The pupil and knee reflexes were abolished. Penkert declares that every case of vomiting spells recurring at intervals of two, three or four weeks suggests possible tabes, and the physician should be very cautious about advising interruption of a pregnancy on this account as the uncontrollable vomiting is liable to continue afterward. In his case the distressing vomiting was the most prominent symptom and seemed to be ordinary hyperemesis gravidarum in a nervous hysterical woman. But hysteria could be excluded and the persisting healthy aspect in spite of the recurring vomiting suggested its special nature. Gastric crises have been noted in nearly 50 per cent. of the cases of tabes in women on record. The absolute absence of pains during the childbirth confirms the assumption that the most important nerves for the genitalia are the uterine paracervical and paravaginal ganglia. These autonomous ganglia do not atrophy in tabes and other affections of the spinal cord, and thus the functioning of the uterus is not interfered with. The pregnancy does not have an unfavorable influence on the tabes, and consequently there is no necessity for artificially terminating it. Some recent theses have reported experiences which show that the children born of tabetic mothers are apparently healthy and develop normally.

125. **Treatment of Puerperal Fever.**—Zangemeister thinks that the principle of drainage should be applied to the puerperal as to any other surgical wound. He has cured mice—which are peculiarly susceptible to streptococcus infection—by prompt removal of the focus in an infection otherwise inevitably fatal in two or three days. By increasing the resistive power by injection of antistreptococcus serum, the removal of the focus proved successful even at a much later period. In case of puerperal peritonitis, good results may follow repeated evacuation of the pus from the abdominal cavity, not attempting continuous drainage. His research has shown the advantages of puncturing the abdomen at the first signs of diffuse peritonitis and rinsing out the abdominal cavity with several liters of warm salt solution, similar to lavage of the stomach or bladder, concluded by pouring into the abdominal cavity a pint of salt solution containing from 0.5 to 1 per cent. nuclein or a solution of adrenalin. He remarks that the estimation of the efficacy of any drug is particularly difficult in puerperal fever owing to its erratic course. "Brilliant successes" have been reported in puerperal fever with remedies which time has shown later to be absolutely worthless. No medicinal preparation should be tried on man, he reaffirms, until after extensive tests on animals.

Münchener medizinische Wochenschrift

March 2, LVI, No. 9, pp. 433-488

128 Manifestations of Phosphorus Poisoning. (Vorgänge der Zelldegeneration, der Entzündung und Neubildung bei den verschiedenen Arten der Phosphorvergiftung.) E. Harnack.
129 *Behavior of Heart and Lungs After Abdominal Operations. (Verhalten der Lungen und des Herzens nach abdominellen Eingriffen.) A. v. Lichtenberg and L. Müller.
130 Tubercle Bacilli in Cheesy-Chalky Glands. (Gehalt käsig-kreidiger Lymphdrüsen an Tuberkelbazillen.) L. Weiss.
131 Lymph Follicles in Bone Marrow of Children. (Lymphfollikel im kindlichen Knochenmarke.) C. Oehme.
132 *Frequency of Tuberculosis in Children. (Die Tuberkulosehäufigkeit im Kindesalter.) F. Hamburger and R. Monti.
133 Etiology of Appendicitis. O. Klauber.
134 Bezold's Functional Tests of Hearing and Deafmutism. F. Wanner.
135 Pubiotomy. (Beitrag zur Hebosteotomie.) H. Völker.

129. **Behavior of Lungs and Heart After Abdominal Operations.**—A recent compilation by Lichtenberg shows that complications on the part of the lungs were responsible for the fatalities after operation on the stomach in 29 per cent.; after operations on the biliary passages in 15 per cent.; in 25 per cent. after herniotomies, in 44 per cent. after operations for goiter, and in 20 per cent. after gynecologic operations. In order to understand the reasons for this he has been making a special study of the condition of the heart and lungs before operations and at various intervals afterward. The findings in 100 cases are tabulated under different headings. They show that postoperative complications on the part of the lungs are far more common than is generally recognized. It is almost certain that many a slight, brief increase in temperature in the first few days after aseptic operations is the work of these occult pulmonary complications. Physical signs of these pulmonary complications are evident as early as the second, third or fourth day; they do not amount to pneumonia but rather provide the soil on which pneumonia develops or they may retrogress entirely in a few days without inconveniencing the patient to any appreciable extent. His series included operations under chloroform, ether or both, local anesthesia and spinal anesthesia, but he never found evidence that any special mode of anesthesia had more influence on the development of postoperative pulmonary complications than the others. His experience confirms the extreme rarity of pneumonia due directly to the inhaled anesthetic; an embolic process is evidently responsible for the postoperative pulmonary complications in the vast majority of cases, but a hypostatic origin must be accepted in a few isolated instances. Pronounced heart disease seems to be less important as a factor than comparatively slight changes in the vascular system and myocardium, and these deserve more attention from this point of view. He adds that the difference in the outline of the heart during inspiration and expiration becomes somewhat modified in the presence of these occult pulmonary complications. The changes in the pulse curve are also important from the standpoint of therapeutics to tide the patient past the danger point, as this curve allows oversight of the condition of the organs of circulation.

132. **Frequency of Tuberculosis in Children.**—Hamburger and Monti give the tabulated findings of tuberculin tests applied to 509 children under treatment in the public hospitals for scarlet fever, diphtheria, typhoid, meningitis or trauma. The Pirquet cutaneous test was applied first; in

case of a negative response 0.1 or 1 mg. tuberculin was injected subcutaneously. Positive reactions were obtained in 271 children, and the proportion of positive responses increased from 9 per cent. at the age of 2 to 51 per cent. at 6; 85 per cent. at 10, and from 93 to 95 per cent. between 11 and 14. The cutaneous test was negative in a number of cases in which the subcutaneous test later induced a positive reaction. In every case with a positive reaction that came to autopsy, some tuberculous focus was discovered, although none of the affections for which the children were being treated had any connection with tuberculosis.

Therapie der Gegenwart, Berlin

March, L, No. 3, pp. 121-168

136 Arteriosclerosis in Light of Experimental Research. C. Benda.
137 *Pneumonia in Children. (Kinderpneumonia.) A. Baginsky. Commenced in No. 2.
138 *Dependence of Disease on Economic Conditions. (Abhängigkeit der Krankheiten von ökonomischen Verhältnissen.) F. von den Velden.
139 *Importance of Appetizers. (Grundsätze für den Genuss der Genussmittel.) W. Sternberg.
140 Treatment of Genu Valgum. G. Müller.
141 Pantoscopic Spectacles for the Elderly. (Korrektion der Alterssichtigkeit durch pantoskopische Augengläser.) E. A. Heimann.

137. **Pneumonia in Children.**—Baginsky refers to acute fibrinous pneumonia in which the task of the physician is mainly to watch over the curative efforts of Nature, restraining them within due bounds and guiding them in proper paths. In this form of pneumonia the dyspnea and pains are the expression of direct intoxication. Under the influence of the fever, antitoxins are generated which neutralize the toxins; the fever must only be kept from excess. This is accomplished by different physicians in the ways which experience and observation have taught them to be most efficient. Baginsky's own method is to refrain from drugs; a temperature of 104 to 106 F. for a few days is not alarming in a child, but the pain and dyspnea should be relieved, and for this he has found a local ice bag over the affected lung beneficial. A second ice bag is applied to the head. Only when delirium, stupor and continuous excessively high temperatures demand further measures he orders cold packs or cooling baths once or twice a day. He lays great stress on a nourishing diet, milk, eggs, bouillon and a little wine. He regards wine as the best tonic and stimulant that can be given to children, not on account of its alcohol content but for its effect as a whole. Under these measures pneumonia has come to be the most successfully treated of all the infectious diseases in his experience. In exceptional cases digitalis, camphor or saline infusion may be necessary. If the children are very anemic he also gives iron; in the progressive form he finds potassium iodid very useful. The elasticity of the heart in childhood obviates the danger of overfilling of the right heart with blood, and consequently there is less tendency to edema of the lungs which is so prevalent in pneumonia in adults. In the very rare cases in which this sequence is observed, prompt venesection may prove a life-saving measure. To do the right thing at the right time and not to do too much is the task of the physician in acute fibrinous pneumonia. In bronchopneumonia the indications are entirely different. Active measures are required to strengthen the patient and to equalize the temperature in the internal organs and the skin. During convalescence from both forms, special care must be taken to keep dust, smoke and foul air out of the lungs. He does not advocate measures at any time to "toughen" children, and regards them as actually dangerous after pneumonia.

138. **Dependence of Disease on Economic Conditions.**—Velden has been studying the statistics of the Gotha life insurance company and has unearthed some interesting facts. The mortality of the comparatively poor and very rich and all stages betweeen is shown to be about the same, but tuberculosis and pneumonia seem to prevail almost exclusively among the less well-to-do, while the wealthier insured supply by far the largest contingent of mental affections, diabetes and acute articular rheumatism, kidney diseases and affections of the circulatory system. The findings in regard to acute articular rheumatism seem to indicate that internal causes are the main factors—possibly congenital, possibly a lack of proportion between the food and the oxidations—instead of infection. Its prevalence among the well-to-do in these tables thus throws some light on its etiology. The table shows that every station in life has its injurious influences so that there is more of an equality in the destinies of men than is generally accepted. The figures related include 6,393 insured for the smaller amounts, 9,329 for larger and 4,258 for the largest sums.

139. **Importance of Appetizers.**—Sternberg's article is an energetic protest against the serious mistake of regarding food exclusively from the standpoint of the chemist. This one-sided view leaves out of account all the important reflex processes started by the senses of smell and taste. Drugs and food, he declares, should be regarded from entirely different standpoints. Food that pleases the palate stimulates the appetite. Not one of the artificial foods on the market is able to arouse the appetite and make the patient want to eat. These artificial foods should, therefore, be rejected on principle. If they were really so valuable a mode of nourishment as the manufacturers proclaim, they would be better adapted for the well than for the sick, as the well do not need so much to have their appetite coaxed. He adds that all drugs almost without exception, destroy the appetite. Among the numerous preparations there is scarcely one which stimulates the appetite; many of them even cause nausea and vomiting or at least depress the appetite. He adds that these views have the most important consequences for medical practice: the general practitioner obtains entirely new standpoints in regard to all substances used as additions to food, not in themselves essential, such as condiments, tobacco, spirits, etc. The question of abstinence for the sick and the well thus assumes an entirely different aspect.

Wiener klinische Wochenschrift, Vienna

March 4, XXII, No. 9, pp. 293-326

142 *Hyperemia of Liver During Menstruation. (Zur Frage der Beziehungen zwischen Leber und Drüsen mit innerer Sekretion.) F. Chvostek.
143 *Functional Diagnosis of Pancreatic Affections. O. Schwarz.
144 Treatment of Tuberculosis. A. Krokiewicz.
145 *Etiology of Dental Periostitis. B. Mayrhofer.

142. **Menstrual Hyperemia of the Liver.**—Chvostek has been having a large number of women examined in the course of research on the relations between the liver and glands with an internal secretion. He found in all but three of thirty women thus examined that the liver increased in size during the menstrual period, the lower margin of the liver showing an increase in size amounting to one or two fingerbreadths or even more. There was nothing in these cases to indicate pathologic conditions in the liver, kidneys or circulatory organs. In one case urobilin appeared in the urine during the menses although it vanished at other times, and the liver and intestines seemed apparently normal. These facts establish, he thinks, a close connection between the liver and the genital glands; probably the hyperemia in the liver is the work of the internal secretion of the ovaries at this time. This close connection between the liver and the genital glands throws light on the toxicoses of pregnant women, although mechanical or metabolic factors may cooperate in the general effect produced. The findings of the research reported also make more comprehensible the abnormal course of liver affections during menstruation and pregnancy.

143. **Functional Diagnosis of Pancreatic Affections.**—Schwarz reports from von Eiselsberg's clinic at Vienna about two dozen cases of various pancreatic affections in which comparative tests of the functioning of the pancreas were made with Sahli's glutoid test, Schlecht's trypsin test and Cammidge's reaction. He was impressed with the important information to be obtained by means of these tests for the diagnosis of direct or reflex influencing of the functioning of the pancreas. The Cammidge test proved especially reliable as the findings were confirmed by the ultimate course of the cases. His experience suggests that the Cammidge reaction is the expression of some disturbance in the functioning of

the pancreas in respect to carbohydrate metabolism, as the findings were invariably positive when the clinical and experimental findings revealed such. He comments further on the frequency of a positive reaction with a circumscribed tumor in the pancreas, the rarity of true diabetes in such cases and the negative findings after successful extirpation of the lesion in the pancreas. The experiences related confirm the influence of the nerves on the functioning of the pancreas; even small circumscribed foci are liable to injure the functioning of the organ by reflex action. In one case, the Cammidge reaction was very pronounced, although the patient was apparently perfectly well; an operation had been done eighteen months before for incarcerated hernia in which nearly six feet of small intestine had been removed (5½ meters).

145. **Etiology of Dental Periostitis.**—Mayrhofer has found that streptococci can develop in the depths of a tooth when a layer of cotton and the filling above are sterile and air-tight. He has traced the source of reinfection in these cases to streptococci lurking in the depths of the tubules of the dentine of the root. They escape in these sheltered nooks the action of even the most vigorous antiseptic cleansing of the cavity. He found them in more than 200 cases. Staphylococci seem to be unable to proliferate in these minute tubules as they grow in bunches, but the streptococci, proliferating in lengthwise chains, find conditions favorable for their development. They may lie latent for months and years until aroused by some lowering of the general resistive vitality from chilling or other cause. He suggests further the possibility that these streptococci lurking in the depths of the tubules in the dentine may be responsible at times for the development of puerperal fever, erysipelas, pyemia and sepsis, as well as of alveolar pyorrhea and bone processes. His article is based on research in 240 cases of gangrene of the pulp.

Gazzetta degli Ospedali e delle Cliniche, Milan

February 14, XXX, No. 19, pp. 193-208

146 *Syphilitic Rabbit Cornea as Antigen for Serum Diagnosis of Syphilis. (Cornea sifilitica del coniglio nella reazione del Wassermann.) F. Simonelli.

147 *Hemorrhagic Purpura and Syphilis. (Il morbus maculosus Werlhofi e la sua origine sifilitica.) G. Paronzini.

February 16, No. 20, pp. 209-216

148 *Familial Pleurisy or Myxedema? (Una famiglia di pleuritici o di mixedematosi?) E. Leonardi.

February 21, No. 22, pp. 225-240

149 Cocain Spinal Anesthesia. (Sulla rachicocainizzazione.) E. Morganti.

146. **Rabbit Cornea as Antigen for Serodiagnosis of Syphilis.**—Inoculation of the cornea of rabbits with syphilitic material results in the production of a typical parenchymatous keratitis, and Simonelli states that the extract of the infected cornea has the same specific action as material from syphilitic fetuses in applying the Wassermann test. He cites a dozen clinical cases in which serodiagnosis with the extract of syphilitic rabbit corneas, fresh or desiccated, gave results identical in every respect with those obtained with antigens from ordinary sources. The desiccated extract has proved fully as effectual as the fresh in his experience, and he advocates the use of the rabbit cornea as a readily accessible and reliable means of obtaining the antigen for the test.

147. **Syphilitic Origin of Hemorrhagic Purpura.**—Paronzini relates the details of a case of Werlhof's disease in a girl of 8 whose foster-mother had proved to be syphilitic. The child was given specific treatment at the age of 4 on account of ulceration of the gums, and when the purpura developed four years later it also yielded to vigorous external mercurial treatment with potassium iodid internally.

148. **Familial Pleurisy or Myxedema.**—Leonardi queries whether to refer to a pleuritic or myxedematous origin the familial tendency described. The pleura filled up at times with an effusion requiring several tappings, but it was never accompanied by fever or pain and it left no after-effects. Three of the sons at puberty and the mother at the menopause and one sister presented this syndrome and it appeared again in the second generation. None of the members of the family has developed tuberculosis. They all live in a deep narrow mountain valley and are pale, with a slightly jaundiced complexion and puffy eyelids. He is inclined to ascribe the tendency to defective thyroid functioning.

Books Received

All books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. A selection will be made for review in the interests of our readers and as space permits.

THE PROBLEM OF AGE, GROWTH, AND DEATH. A Study of Cytomorphosis Based on Lectures at the Lowell Institute, March, 1907. By Charles S. Minot, LL.D., D.Sc., James Stillman Professor of Comparative Anatomy in the Harvard Medical School. Cloth. Pp. 280, with illustrations. Price, $2.50. New York: G. P. Putnam's Sons, 1908.

MANUAL OF OPERATIVE SURGERY. By John Fairbairn Binnie, A.M., C.M., Professor of Surgery, Kansas State University. Volume I. "Operations on the Head, Neck, Nerves, Trunk, Genito-Urinary System." Fourth Edition. Flexible Leather. Pp. 832, with illustrations. Price, $3.50. Philadelphia: P. Blakiston's Son & Co., 1909.

MANUAL OF DISEASES OF THE EAR. By Thomas Barr, M.D., Lecturer on Diseases of the Ear, Glasgow University, and J. Stoddart Barr, M.B., Ch.B., Assistant to Lecturer on Diseases of the Ear, Glasgow University. Fourth Edition. Cloth. Pp. 477, with illustrations. Price, $4.50. New York: The Macmillan Co., 1909.

THE THERAPEUTICS OF RADIANT LIGHT AND HEAT AND CONVECTIVE HEAT. By William Benham Snow, M.D., Author of "A Manual on Electro-Static Modes of Application, Therapeutics, Radiography, and Radiotherapy." Cloth. Pp. 119. Price, $2. New York: Scientific Authors' Publishing Co., 349 W. 57th St.

A TEXT-BOOK OF MATERIA MEDICA, PHARMACOLOGY AND THERAPEUTICS. By George F. Butler, A.M., Ph.G., M.D., Professor and Head of the Department of Therapeutics, Chicago College of Medicine and Surgery. Sixth Edition. Cloth. Pp. 708. Price, $4. Philadelphia: W. B. Saunders Co., 1908.

A TEXT-BOOK OF MEDICAL CHEMISTRY AND TOXICOLOGY. By James W. Holland, A.M., M.D., Professor of Medical Chemistry and Toxicology, and Dean, Jefferson Medical College, Philadelphia. Second Edition. Cloth. Pp. 655, with illustrations. Price, $3. Philadelphia: W. B. Saunders Co., 1908.

A SYSTEM OF OPHTHALMIC THERAPEUTICS. Edited and Chiefly Written by Casey A. Wood, M.D., C.M., D.C.L., Late Professor of Ophthalmology and Head of the Department, Northwestern University Medical School. Cloth. Pp. 926, with illustrations. Price, $7. Chicago: Cleveland Press, 1909.

REFRACTION AND HOW TO REFRACT. By James Thorington, A.M., M.D., Professor of Diseases of the Eye in the Philadelphia Polyclinic and College for Graduates in Medicine. Fourth Edition. Cloth. Pp. 324, with illustrations. Price, $1.50. Philadelphia: P. Blakiston's Son & Co., 1909.

THE HERTER LECTURES (NEW YORK, 1908) ON THE FLUIDS OF THE BODY. By Ernest H. Starling, M.D., F.R.C.P., F.R.S., Jodrell Professor of Physiology in the University College, London. Cloth. Pp. 186, with illustrations. Price, $2. Chicago: W. T. Keener & Co., 1909.

HANDBUCH DER BIOCHEMIE DES MENSCHEN UND DER TIERE. Herausgegeben von Prof. Dr. Phil. et Med. Carl Oppenheimer, in Berlin. 14th installment. Paper. Pp. 240. Price, 5 marks. Jena: Verlag von Gustav Fischer, 1909.

PRIMARY STUDIES FOR NURSES. By Charlotte A. Aikens, Late Director of Sibley Memorial Hospital, Washington, D. C. Cloth. Pp. 435, with illustrations. Price, $1.75. Philadelphia: W. B. Saunders Co., 1909.

NOTES AND THOUGHTS FROM PRACTICE. By W. J. Tyson, M.D., F.R.C.P., F.R.C.S., Hon. Physician, Victoria Hospital, Folkstone. Paper. Pp. 95. Price, 2 shillings. London: John Bale, Sons & Danielsson, 1909.

EPOCH-MAKING CONTRIBUTIONS TO MEDICINE, SURGERY AND THE ALLIED SCIENCES. Collected by C. N. B. Camac, A.B., M.D. Cloth. Pp. 435, with illustrations. Price, $4. Philadelphia: W. B. Saunders Co., 1909.

BANCROFT TRAINING SCHOOL FOR MENTALLY SUBNORMAL CHILDREN, Haddonfield, N. J. Manual of the Course of Study. Arranged by Margaret Bancroft and E. A. Farrington, B.S., M.D. Paper. Pp. 120.

HANDBOOK FOR ATTENDANTS ON THE INSANE. Fifth Edition. Published by the Authority of the Medico-Psychological Association. Cloth. Pp. 390. Price, $1. Chicago: W. T. Keener & Co., 1909.

FOURTH ANNUAL REPORT OF THE TRUSTEES OF THE RHODE ISLAND STATE SANATORIUM, at Wallace Lake, to the General Assembly at January Session, 1909. Paper. Pp. 90.

AN INTRODUCTION TO THE SCIENCE OF RADIO-ACTIVITY. By Charles W. Raffety. Cloth. Pp. 208, with illustrations. Price, $1.25. New York: Longmans, Green & Co., 1909.

VERHANDLUNGEN DER BERLINER MEDIZINISCHEN GESELLSCHAFT, 1908. Band xxxix. Paper. Pp. 505. Berlin: Druck von L. Schumacher, 1909.

ANNUAL REPORT OF THE LIBRARY COMMITTEE OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA, 1908. Paper. Pp. 8.

TWENTY-SEVENTH ANNUAL REPORT OF THE STATE HOSPITAL FOR THE INSANE at Warren, Pa. 1908. Paper. Pp. 121.

STATE OF NEVADA, BIENNIAL REPORT OF THE ORPHANS' HOME DIRECTORS, 1907-8. Paper. Pp. 28.

SEVENTEENTH ANNUAL REPORT OF BETHANY HOME OF RHODE ISLAND, 1908. Paper. Pp. 22.